UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

APR 0 1 2003

REPLY TO THE ATTENTION OF: WG-15J

Richard A. Powers, Chief
Water Division
Michigan Department of Environmental Quality
P.O. Box 30273
Lansing, Michigan 48909-7773

Dear Mr. Powers:

Enclosed please find a copy of the Michigan Department of Environmental Quality's (MDEQ) Fiscal Year 2002 Data Verification final report.

This report presents the results of the data verification audit conducted by The Cadmus Group, a contractor for the U.S. Environmental Protection Agency (U.S. EPA), on September 24 - 28, 2002. A file audit of individual community water systems was conducted to determine whether the data in the State files and State data management systems were consistent with the information reported to the Federal data management system. The results are summarized in the Executive Summary of the enclosed report.

The State is commended for the number of strengths in the State drinking water program noted by the Cadmus Group and the Region, which reflects good quality work being done by the MDEQ staff. These strengths are listed in the Executive Summary.

The report also makes a number of recommendations. As a follow up to this report, we will include these recommendations in the FY 2004 Annual Resource Deployment Plan; thus the State will be able to prioritize these tasks in light of its existing workload.

As a result of the data verification, the Region plans to revisit the Total Coliform monitoring policy at the consecutive systems in Detroit, to ensure that it adequately protects public health. The Region is also continuing discussions with U.S. EPA Headquarters concerning its Lead and Copper rule interpretation that a "site is a faucet" and with MDEQ concerning its LCR interpretation that a "site is a building".

If you have questions, please do not hesitate to call me at (312) 886-6206 or Jennifer Crooks of my staff at (312) 886-0244.

Sincerely yours,

Charlene J. Denys, Chief
Ground Water and Drinking Water Branch

Enclosure

cc: James K. Cleland, MDEQ
Bryce Feighner, MDEQ
Brock Howard, MDEQ
Tim Benton, MDEQ
Jon Bloemker, MDEQ

U. S. Environmental Protection Agency
Public Water System Supervision Program

Final Report
Data Verification Review

Michigan Department of Environmental Quality
Water Division

Prepared by the Cadmus Group, Inc
March 5, 2003

FINAL REPORT

U.S. Environmental Protection Agency
Public Water System Supervision Program
Data Verification Report

Michigan Department of Environmental Quality
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EXECUTIVE SUMMARY

I. Introduction

During the week of September 24, 2002, the "team," consisting of four representatives of The Cadmus Group, Inc. (Valerie Meiers, Amy Blessinger, Kim Clemente, and Erin Hartigan) and two representatives of Region 5 of the Environmental Protection Agency (EPA) (Jennifer Crooks and Rita Garner), and one representative from EPA Headquarters (Khanna Johnston) conducted a data verification (DV) in the Michigan Department of Environmental Quality, Water Division (MDEQ). The team reviewed the files of a randomly selected number of public water systems (PWSs) maintained by MDEQ in their Southeast District Office (Livonia), Jackson District Office, Saginaw Bay District Office (Bay City), and Shiawassee District Office (Perry). The team reviewed only community water systems (CWSs). This report documents the findings of the review.

A. State Offices

The MDEQ Central Office is located in Lansing, Michigan. MDEQ maintains eight District Offices throughout the State. The MDEQ was undergoing a reorganization of Division offices (which affected the Districts) that began the week before the data verification took place. Previous to the reorganization, the Water Division was called the "Division of Drinking Water and Radiological Protection." Analytical results, compliance determination and enforcement are handled within each District Office.

B. Description of Sample

Table 1 identifies the SDWIS/Fed inventory for the MDEQ and the number of community water systems in the stratified, random sample reviewed by the team. The samples represented a 90 percent confidence interval with an error tolerance level of 5 percent. Additional systems were added for special LCR review (see Section C - Description of Review). Noncommunity water systems and mobile home parks (which are CWSs) were not reviewed because Region 5 conducted a small system review in 2001. The State wishes to note that in Table 1, SDWIS/Fed and MDEQ total community water system

numbers do not agree because of MDEQ's inclusion of water treatment plants owned by a "board" or "authority" and that serve more than one community supply but in themselves sere no population. For example, East-Lansing Meridian Water and Sewer Authority is comprised of a water treatment plant that serves the city of East Lansing and Meridian Township. The DV team does not count this difference as a discrepancy.

Table 1: Number of PWSs in SDWIS/Fed and MDEQ Inventories and Number Reviewed by Data Verification Team.

	Number of CWSs
SDWIS/Fed Inventory[1]	1,468
MDEQ Inventory	1,475
Systems in Sample[2]	
Livonia District Office	18
Jackson District Office	18
Bay City District Office	18
Shiawassee District Office	21
Number of Systems Reviewed[3]	
Livonia District Office	18
Jackson District Office	18
Bay City District Office	18
Shiawassee District Office	21

[1]SDWIS/Fed inventory as of September 2, 2002. MDEQ as of 10/4/02. [2]Includes extra systems reviewed for full LCR only. [3]Includes extra systems reviewed for full LCR only.

C. Description of Review

Table 1 identifies the SDWIS/Fed inventory for the MDEQ and the number of community water systems in the stratified, random sample reviewed by the team. The samples represented a 90 percent confidence interval with an error tolerance level of 5 percent. Additional systems were added for special LCR review (see Section C - Description of Review). Noncommunity water systems and mobile home parks (which are CWSs) were not reviewed because Region 5 conducted a small system review in 2001. The State wishes to note that in Table 1, SDWIS/Fed and MDEQ total community water system numbers do not agree because of MDEQ's inclusion of water treatment plants owned by a "board" or "authority" and that serve more than one community supply but in themselves serve no population. For example, East-Lansing Meridian Water and Sewer Authority is comprised of a water treatment plant that serves the city of East Lansing and Meridian Township. The DV team does not count this difference as a discrepancy.

II. Findings

Below are the findings of the DV team. We will discuss any implementation policies specific to the State, the greatest strengths of the State's drinking water program and the areas most needing improvement, as related to the major discrepancies identified. Table 2 lists the period of review for each rule. Tables 3A-G numerically summarize the discrepancies detected for each system type (reason codes are defined in Appendix A) and Table 4 shows the number of CWSs with LCR discrepancies.

Table 2: Period of Review

Category	Date
Inventory	Most recent
CCR	Year 2000, due in 2001
Total Coliform Rule	Jul. 1, 2001 - Jun. 30, 2002
Lead & Copper Rule	2 most recent samples; full review on 11 new since 1996
Phase II/V (except nitrate)	1999-2001
Nitrate	2000, 2001
SWTR and TTHMs	Jul. 1, 2001 - Jun. 30, 2002
Radionuclides	2 most recent samples
Enforcement	Per related violation
Public Notice	Per related violation

Implementation of Regulations in Michigan

State-wide waivers are in effect for asbestos, dioxin, glyphosate, endothall, diquat, adipate, and phthalate. Ground water systems classified as "not vulnerable" or "moderately vulnerable" are waived from monitoring for EDB, DCBP, and dalapon. If a PWS has no "coal tar lining" in its distribution system, they are waived from monitoring for benzo(a)pyrene.

Michigan issues Phase II/V waivers to systems on the basis of whether a system uses groundwater or surface water sources, or whether they have an approved wellhead program and a vulnerability assessment (both of which may include testing for the presence of tritium in groundwater). See Appendix C for a description of the State's waiver program. PWSs do not request waivers, but are granted waivers after evaluation of an approved wellhead delineation program or vulnerability assessments are completed.

MDEQ has primacy for the TCR, Phase II/V, Radionuclides, SWTR, and LCR rules. The State has primacy extension agreements in effect for the Public Notification Rule and Stage 1 Disinfection Byproducts and Interim Enhanced SWTR. The State is also implementing the LCR Minor Revisions under an approved extension agreement with EPA Region 5. The State's CCR primacy package has been reviewed has been approved by EPA's program office and Regional Council.

Several alternative drinking water policies exist in Michigan.

- For new community water sources, MDEQ allows
  - ground water sources with an approved wellhead delineation or tritium results less than 1.0 mg/L and;
  - ground water sources serving fewer than 10,000 persons without an approved wellhead delineation;

  to take only one VOC sample in three years (instead of the required quarterly monitoring before reduction of sampling.) A new system or new source is allowed to waive quarterly monitoring if all the initial VOC results are below detection.

- Regarding the LCR, MDEQ was previously exempting multi-family dwellings (i.e., apartment buildings, nursing homes) from LCR sampling because they did not fit the Tier structure. After MDEQ adopted the LCRMR, they began requiring the previously exempt systems to begin LCR sampling, generally in 2000 and 2001.

- MDEQ also allows systems purchasing water from the City of Detroit (MI0001800) to collect LCR samples by an alternative method than that allowed by the Federal Regulations. This policy was approved by the Region and documentation of this policy can be found in Appendix D.

- MDEQ requires that all PWSs sample for nitrite every three years.

- During the previous data verification (April 1997) the data verification team noted that, although not permitted by Federal regulations, in an informal agreement with Region 5 in 1988, the State waived monitoring for radionuclides subsequent to the initial round of monitoring. Due to financial constraints and staff reductions, this initial sampling was conducted over a 10-year period (FY77-FY87). In FY 1994, the Region communicated its concern that radionuclide resampling be resumed as soon as possible in Michigan, in the interest of public health. The State agreed to conduct radionuclide sampling over a four-year period, from FY 1995 through FY 1998 and is ongoing.

  Region 5 agreed with MDEQ's proposed monitoring strategy as described above. The strategy allowed one grab sample at each entry point to the distribution system instead of quarterly monitoring for new systems. Existing systems were required to perform radionuclide monitoring in 1995-1998; all existing CWSs were required to monitor once during this period, then proceed on a "one sample every four years" schedule. On this basis, for new community water sources, MDEQ only requires one radionuclide sample every four years. Federal regulations state that community water systems must complete four quarters of sampling for radionuclide contaminants before sampling is reduced to once every four years [40 CFR §141.26(a)(1)].

- CWSs purchasing water from the City of Detroit (MI0001800) collect only 20% of the required number of TCR samples based on their population. For instance, the City of Warren (MI0006900) with a population of 144,864 should collect 120 TCR samples per month. Since this system purchases water from the City of Detroit, the system currently only collects 24 TCR samples per month. This consecutive system approach was approved by the EPA Region in the 1970's, but the Region is currently revisiting this approach to TCR monitoring to ensure that it provides an adequate level of public health protection. Some documentation of this policy can be found in Appendix E.

Strengths of Program

Overall, MDEQ has a strong program with relatively few discrepancies. Overall, the team noted few discrepancies in population and service connections, TCR, nitrate, and radionuclides and no discrepancies for system status, source, city served, CCR, IOC, VOC, SOC, total trihalomethanes, surface water treatment rule, enforcement, or public notification. The few discrepancies that were identified resulted from incorrect addresses or population and service connection information, or missing nitrate data. The team also determined that most information regarding the Lead and Copper Rule, including sample site certifications, studies, public education, and water quality parameter results were present in the files. There were unusually few Lead and Copper Rule discrepancies.

General

Overall, the team found very few discrepancies. The DV team noted that most discrepancies found were remedied while the team was on site. The team also noted, that generally, most discrepancies having to do with nursing homes took place prior to January 1, 2002, when the MDEQ inherited the systems from the Department of Consumer and Industry Services (DCIS).

Southeast District Office The files were well organized and easy to use. Sanitary surveys were detailed and informative. Tracking for consecutive system monitoring for the LCR and TCR (for systems purchasing from the City of Detroit) is clear and well documented. TCR sampling site plans are present in the files and updated regularly.

Staff are knowledgeable about both State and Federal regulations, and often work with systems to encourage compliance with regulations, rather than relying solely on enforcement actions. Reminder and scheduling letters are sent to systems encouraging them to collect samples early in each monitoring period. Letters were also sent out to systems to notify them of new monitoring requirements for the new Radionuclides Rule to ensure compliance with the new regulations. All inventory discrepancies identified during the data verification were corrected while the team was on-site.

Jackson District Office The files were well organized and easy to use in this office. Sanitary surveys were detailed and informative. Tracking for consecutive system monitoring for the LCR and TCR (for systems purchasing from the City of Detroit) is clear and well documented. TCR sampling site plans are present in the files and updated regularly.

Staff are knowledgeable about both State and Federal regulations, and often work with systems to encourage compliance with regulations, rather than relying solely on enforcement actions. Reminder and scheduling letters are sent to systems encouraging them to collect samples early in each monitoring period. Letters were also sent out to systems to notify them of new monitoring requirements for the new radionuclides rule to ensure compliance with the new regulation. All inventory discrepancies identified during the data verification were corrected while the team was still on-site.

Saginaw Bay District Office Files were well organized and easy to use in this office. Sanitary surveys were detailed and informative. Tracking for consecutive system monitoring for the LCR is clear and well documented. TCR sampling site plans are present in the files and updated regularly. SWTR monthly operating reports were complete and easily understood, with TCR results and CT/log inactivation calculations attached.

Personnel in this District Office have visited all nursing homes that have come under their administration, and all systems have been reviewed for correct monitoring schedules. All nursing homes have been moved to a monthly monitoring schedule for TCR, from the previous quarterly schedule.

The District manager in this office conducts occasional internal reviews to determine if monitoring and compliance is being completed correctly. The team also noted that District personnel were correcting any discrepancies as they were found.

Shiawassee District Office The team found that hard copy files were well organized and informative. Reminder letters and sampling schedules for the CWSs were complete and easily understandable, and were sent promptly to the systems. TCR sample site plans were present in the files and updated annually.

The District's sanitary survey format was readily understandable and informative. The team also noted that District personnel were correcting any discrepancies as they were found.

Areas Needing Improvement

There were several discrepancies for name and address of administrative contact in each District Office. These discrepancies seem to have resulted from confusion in the transfer of data from the sanitary survey or other sources to SDWIS/State.

Southeast District Office

- The District may wish to develop a more efficient process for transferral of inventory population and service connection information from sanitary surveys or other source information to SDWIS/State.

Jackson District Office

- The District may wish to develop a more efficient process for transferral of inventory population and service connection information from sanitary surveys or other source information to SDWIS/State.

Saginaw Bay District Office

- The District may wish to develop a more efficient process for transferral of inventory population and service connection information from sanitary surveys or other source information to SDWIS/State.

Shiawassee District Office

- If the District intends to allow Sparrow Health Care (MI MI0063477) to remain on a quarterly TCR sampling schedule, this decision should be documented in the files.

- The District may wish to develop a more efficient process for transferral of inventory population and service connection information from sanitary surveys or other source information to SDWIS/State.

The DV team hopes that the findings and recommendations outlined in this report will be of use to MDEQ in improving data reporting and tracking methods.

Table 3A: Inventory

Violation Category/Type	Number of Systems with this Discrepancy
Jackson District Office	
Community Water Systems Reviewed: 18	
Wrong or missing address of administrative contact in SDWIS/Fed	1
Wrong or missing name of administrative contact in SDWIS/Fed	1
Population not in agreement with SDWIS/Fed	3
Number of service connections not in agreement with SDWIS/Fed	2
Owner type not in agreement with SDWIS/Fed	1
Missing Sanitary Survey	1
Livonia District Office	
Community Water Systems Reviewed: 18	
Wrong or missing address of administrative contact in SDWIS/Fed	1
Wrong or missing name of administrative contact in SDWIS/Fed	2
Population not in agreement with SDWIS/Fed	3
Number of service connections not in agreement with SDWIS/Fed	7
Bay City District Office	
Community Water Systems Reviewed: 18	
Wrong or missing address of administrative contact in SDWIS/Fed	1
Wrong or missing name of administrative contact in SDWIS/Fed	1
Population not in agreement with SDWIS/Fed	2
Number of service connections not in agreement with SDWIS/Fed	2
Missing Sanitary Survey	2
Shiawassee District Office	
Community Water Systems Reviewed: 21	
Wrong or missing name of administrative contact in SDWIS/Fed	1
Population not in agreement with SDWIS/Fed	3
Number of service connections not in agreement with SDWIS/Fed	2
Missing Sanitary Survey	1

Table 3B: CCR

Reason for Discrepancy	Column A Number of Systems with Discrepancies	Column B Number of Violations Determined by State or DV team	Column C Data Flow Discrepancies	Column D Compliance Determination Discrepancies
Jackson District Office				
Community Water Systems Reviewed: 18 Total Number of Systems with Violations: 4				
Number of Violations Determined Correctly by State		4		
	Total	4		
Livonia District Office				
Community Water Systems Reviewed: 18 Total Number of Systems with Violations: 4				
Number of Violations Determined Correctly by State		4		
	Total	4		
Bay City District Office				
Community Water Systems Reviewed: 18 Total Number of Systems with Violations: 4				
Number of Violations Determined Correctly by State		4		
	Total	4		
Shiawassee District Office				
Community Water Systems Reviewed: 21 Total Number of Systems with Violations: 6				
Number of Violations Determined Correctly by State		6		
	Total	6		

Table 3C: Total Coliform Rule

Reason for Discrepancy	Column A Number of Systems with Discrepancies	Column B Number of Violations Determined by State or DV team	Column C Data Flow Discrepancies	Column D Compliance Determination Discrepancies
Jackson District Office				
Community Water Systems Reviewed: 18 Total Number of Systems with Violations: 1				
Number of Violations Determined Correctly by State		1		
	Total	1		
Bay City District Office				
Community Water Systems Reviewed: 18 Total Number of Systems with Violations:1				
G- Incorrect information entered into database	1	1		1
Number of Violations Determined Correctly by State		0		
	Total	0		1
Shiawassee District Office				
Community Water Systems Reviewed: 21 Total Number of Systems with Violations:2				
Number of Violations Determined Correctly by State		2		
	Total	2		

Table 3D: Phase II/V

Reason for Discrepancy	Column A Number of Systems with Discrepancies	Column B Number of Violations Determined by State or DV team	Column C Data Flow Discrepancies	Column D Compliance Determination Discrepancies
Jackson District Office				
Community Water Systems Reviewed: 15 Total Number of Systems with Violations: 2				
N - Insufficient quarterly monitoring conducted after detect	1	2		2
Number of Violations Determined Correctly by State		0		
	Total	2		2
Shiawassee District Office				
Community Water Systems Reviewed: 15 Total Number of Systems with Violations: 1				
E - Violation in State database not reported to SDWIS/Fed	1	1	1	
Number of Violations Determined Correctly by State		0		
	Total	1	1	

Table 3E: Radionuclides

Reason for Discrepancy	Column A Number of Systems with Discrepancies	Column B Number of Violations Determined by State or DV team	Column C Data Flow Discrepancies	Column D Compliance Determination Discrepancies
Jackson District Office				
Community Water Systems Reviewed: 9 Total Number of Systems with Violations: 1				
A - No sample data; no violation assigned	1	1		1
Number of Violations Determined Correctly by State		0		
	Total	1		1
Bay City District Office				
Community Water Systems Reviewed:9 Total Number of Systems with Violations: 1				
A - No sample data; no violation assigned	1	1		1
Number of Violations Determined Correctly by State		0		
	Total	1		1
Shiawassee District Office				
Community Water Systems Reviewed:15 Total Number of Systems with Violations: 1				
Number of Violations Determined Correctly by State		1		
	Total	1		

Table 3F: Surface Water Treatment Rule

Reason for Discrepancy	Column A Number of Systems with Discrepancies	Column B Number of Violations Determined by State or DV team	Column C Data Flow Discrepancies	Column D Compliance Determination Discrepancies
Livonia District Office				
Community Water Systems Reviewed: 2 Total Number of Systems with Violations: 1				
Number of Violations Determined Correctly by State		1		
	Total	1		

Table 3G: Enforcements

Reason for Discrepancy	Column A Number of Systems with Discrepancies	Column B Number of Violations Determined by State or DV team	Column C Data Flow Discrepancies	Column D Compliance Determination Discrepancies
Jackson District Office				
Community Water Systems Reviewed: 18 Total Number of Systems with Violations: 4				
Number of Violations Determined Correctly by State		3		
	Total	3		
Livonia District Office				
Community Water Systems Reviewed: 18 Total Number of Systems with Violations: 4				
Number of Violations Determined Correctly by State		4		
	Total	4		
Bay City District Office				
Community Water Systems Reviewed: 18 Total Number of Systems with Violations: 4				
Number of Violations Determined Correctly by State		4		
	Total	4		
Shiawassee District Office				
Community Water Systems Reviewed: 21 Total Number of Systems with Violations: 7				
Number of Violations Determined Correctly by State		7		
	Total	7		

Note 1: Nine CWSs in the Bay City District Office, six CWSs in the Shiawassee District Office, three CWSs in the Jackson District Office sample, and nine CWSs in the Livonia District Office sample purchase their water. Purchased systems are not required to perform monitoring for Phase II/V and radiological chemicals, TTHMs, or the SWTR and thus are not reviewed for those rules.

Note 2: Column A shows the number of systems that have discrepancies. The number of violations in Column B corresponds to the number of Federal violations identified by the State or DV team. These numbers are provided as a frame of reference against which the number of discrepancies can be compared.

Note 3: Data flow discrepancies refer to violations or enforcement actions that are noted in the State file and/or database but that are not reported or are incorrectly reported to SDWIS/Fed. Discrepancies are calculated for each compliance period and for a given contaminant or contaminant group.

Note 4: A compliance determination discrepancy occurs when a State does not detect a violation or incorrectly identifies a system as being in violation of a Federal regulation. For example, if monitoring has not been conducted by a system and no violation is acknowledged in State file or database and no violation is reported to SDWIS/Fed, then a compliance determination discrepancy is assigned. For example, assume that a system was required to conduct quarterly SOC monitoring and the DV team saw no evidence that the monitoring had been conducted, either in the State files or database. Furthermore, no violations had been reported to SDWIS/Fed. The team would record this as four M/R compliance determination discrepancies: quarterly violations for one year between 1996 and 1998, or the period of review.

Note 5: State violations are not considered in the discrepancy assessment.

Note 6: Reason codes can be found in Appendix A, Data Verification Discrepancy Definitions.

Table 4: LCR Discrepancies

Requirement	Number of systems that:	Jackson CWSs (18)	Livonia CWSs (18)	Bay City CWSs (18)	Shiawassee CWSs (21)
Initial Monitoring (Violation Code 51)	Never sampled				
	Began monitoring after required deadline				
	Never completed two, consecutive six-month rounds of sampling				1
	Did not collect enough samples or calculated 90th percentile value incorrectly				
	Submitted samples late				
	Have incorrect or missing violation in SDWIS				
Return to Compliance (RTC) for Initial Monitoring (Enforcement Code SOX)	RTC after only one round of sampling				
	Never RTC after sampling begun				
	Incorrect or missing RTC date in SDWIS				
	Have not RTC, but SOX code is in SDWIS				
Routine/Follow-up Monitoring (Violation Code 52)	Failed to collect two, consecutive six-month rounds after OCCT (follow-up samples)				
	Never completed annual/triennial samples (routine samples)				
	Failed to sample in summer months (routine samples)		1		
	Submitted samples late or incorrectly			1	
	Did not collect enough samples or calculated 90th percentile value incorrectly				
	Have incorrect or missing violation in SDWIS				1
Steps Required after ALE (or required for all large systems)	Did not report ALE to SDWIS (PB90 or CU90)				1
	Did not detect ALE or ALE not valid				
	Never collected water quality parameters (WQPs) (Violation Code 53)				
	Collected WQPs late or incorrectly (Violation Code 53)				1
	Never collected source water samples (Violation Code 56)				
	Collected source water samples late or incorrectly (Violation Code 56)				
	Source water treatment recommendation: Failed or late to submit recommendation (Violation Code 61)				
	Source water installation: Failed to meet deadline (Violation Code 62)				
	Public education: Failed to do PE on time and at proper frequency (Violation Code 65)				
	OCCT Study and/or recommendations: Failed to meet deadlines (Violation Code 57)				
	Corrosion control installation (Violation Code 58)				
	Lead service line replacement: Failed to meet schedule for partial replacement (Violation code 64)				
	Lead service line replacement: Failed to meet schedule for total replacement (Violation code 64)				
	All previous violations in this category: Public notification not demonstrated				
	All previous violations in this category: Have incorrect or missing violation in SDWIS				

I. Introduction

During the week of September 24, 2002, the "team," consisting of four representatives of The Cadmus Group, Inc. (Valerie Meiers, Amy Blessinger, Kim Clemente, and Erin Hartigan) and two representatives of Region 5 of the Environmental Protection Agency (EPA) (Jennifer Crooks and Rita Garner), and one representative from EPA Headquarters (Khanna Johnston) conducted a data verification (DV) in the Michigan Department of Environmental Quality, Water Division (MDEQ). The team reviewed the files of a randomly selected number of public water systems (PWSs) maintained by MDEQ in their Southeast District Office (Livonia), Jackson District Office, Saginaw Bay District Office (Bay City), and Shiawassee District Office (Perry). The team reviewed only community water systems (CWSs). This report documents the findings of the review.

The MDEQ Central Office is located in Lansing, Michigan. The MDEQ was undergoing a reorganization of Division offices (which affected the Districts) that began the week before the data verification took place. The reorganization was to be completed by the end of October, 2002. Previous to the reorganization, the Water Division was called the "Division of Drinking Water and Radiological Protection." One effect of this reorganization was that the Shiawassee District Office CWS program and personnel would be re-located to Lansing.

Responsibility for the Community Water System program is divided between the eight District Offices located throughout the State. Analytical results, compliance determination and enforcement are handled within each office.

The DV had two objectives. The first objective was to detect discrepancies between the PWS data in MDEQ files and their database, (or the State version of the Safe Drinking Water Information System, SDWIS/State), and the data reported to the Federal Safe Drinking Water Information System (SDWIS/Fed) regarding inventory, enforcement, violations, and milestones (if applicable) for the Total Coliform Rule (TCR), Lead and Copper Rule (LCR), Phase II/V Rules, Total Trihalomethanes, Surface Water Treatment Rule (SWTR), radiological contaminants, and Consumer Confidence Reports (CCR). The second objective was to ensure that MDEQ is determining compliance in accordance with Federal and State primacy regulations.

The outcome of the DV is an itemization of discrepancies, calculated by system type (i.e., CWS, NTNCWS, and TNCWS) and by regulation. The team totals the number of violations incurred by the systems during the period of review. They then determine the number of these violations that were not reported to SDWIS/Fed, or any other discrepancies.

There are two types of discrepancies: data flow discrepancies and compliance determination discrepancies. Data flow discrepancies are violations of National Primary Drinking Water Regulations that are detected by the program, but are not posted to SDWIS/Fed. The team knows that the program detected the violation when they find correspondence with the system, enforcement actions, or violations in SDWIS/State. Data flow discrepancies also occur when the State incorrectly reports the violation to

SDWIS/Fed, such as incorrectly coding a violation. Compliance determination discrepancies occur when the program did not detect the violation or reports a violation to SDWIS/Fed that was not substantiated by information contained in the program files or database.

Appendix A contains a complete list of the types of discrepancies identified by the team and their definitions. Tables 3 A-G in the Executive Summary summarize the number and type of discrepancies for CWSs, NTNCWSs, and TNCWSs. Table 4 summarizes the LCR review. For more detail, Appendix B provides system-specific lists of each discrepancy organized by rule. Appendix C contains the Phase II/V waiver policy. Appendices D and E contain the City of Detroit LCR and TCR policy, respectively. Appendix F contains the enforcement policy used by the program.

II. Description of the Sample

A stratified, random sample of community water systems was selected for Michigan. According to SDWIS/Fed, MDEQ regulates 1,468 active CWSs (based on SDWIS/Fed report dated September 2, 2002). The sample of systems reviewed represents a 90 percent confidence interval with an error tolerance level of 5 percent.

The sample of PWSs reviewed was developed as follows. The DV project examines the State's accuracy rate for reporting inventory changes, violations, milestones, and enforcement actions to SDWIS/Fed. We define all of these required reporting elements as "actions." The team must review enough actions to obtain statistically significant results. However, the only logical unit of analysis is systems rather than actions, as data in SDWIS/Fed and in State records are organized by system. To convert actions to systems, Cadmus estimated the average number of actions per system nationwide by examining data from DV trips completed in 1997 and 1998. (The average number of actions per system was determined to be 11.38 for CWSs, 13.22 for NTNCWSs, and 8.51 for TNCWSs.) By multiplying the average number of actions per system times the number of systems in the State, the total number of actions in the State can be estimated. Once the total number of actions is determined, a sample can be drawn. Using a confidence level of 90 percent and an error tolerance of 5 percent, the optimal number of actions needed to obtain statistically significant results was determined. The number of actions was translated into number of systems that must be reviewed by using, again, the average number of systems.

The DVs use a two-stage cluster sampling approach to pick the systems for file review. First, the team must draw a random sample of systems in the State using SDWIS/Fed's random number generator. Then, the team must identify all actions for the systems selected and determine whether they were reported correctly to SDWIS/Fed. For further explanation of the random sampling methods used, see Chapter Five in *EPA Protocol for Participation in a PWSS Program Data Verification* available from The Cadmus Group, Inc.

III. State Data Flow

Describing the flow of information from the point of sample collection to submission of violations, enforcement actions, and milestones to SDWIS/Fed sometimes illustrates problems States face in managing their large data sets. The chain of custody for samples is explained below, as well as the methods used by MDEQ to store information and calculate compliance.

System Files The MDEQ District Offices each maintain their own hard copy files. Each office is also responsible for maintaining inventory, violations and enforcement actions in SDWIS/State. District Offices may also maintain auxiliary databases for tracking of chemical and radionuclide sampling schedules.

Files in all District Offices were highly organized. Most offices maintain a color coded filing system for easy identification of correspondence, analytical results, and permits/inspections, etc. The Lead and Copper Rule folder for each system had a sampling schedule attached to the front cover to more easily identify lead and copper monitoring results and schedules, which helped the team track system compliance with the LCR. Documentation of compliance decisions in the files was also excellent.

Sample Collection and Analysis PWSs are responsible for collection of all samples. The District Offices forward a yearly monitoring schedule letter to each CWS. Samples are normally hand delivered or shipped via courier or US Mail to the State laboratory in Lansing. Hard copy analytical results are forwarded to the Central Office in Lansing, who in turn, forwards results to each District daily. CWSs may use a State-certified commercial laboratory for analyses, and are responsible for reporting results to the District Offices. No laboratories report to the State electronically, except for occasional SWTR monthly operating reports.

For CWSs, approximately 95 percent of chemicals are analyzed by the State laboratory, with the remainder analyzed by commercial or contract laboratories. The State laboratory analyzes approximately 50 percent of TCR and LCR samples. radionuclides are analyzed entirely by State-certified commercial laboratories located out of state.

Data Storage and Compliance Determination Analytical results for all rules are stored in hard copy in each District Office. MDEQ maintains a Division server with networked PCs. The program uses SDWIS/State to manipulate its data, and District Offices can access SDWIS/State through T-1 lines. Monitoring schedules are provided to CWSs annually by each District Office.

For all analytical samples, including total or *E. coli* positive TCR sample or a Phase II/V detect or MCL, the State laboratory sends a copy of all bacteriological and chemical test results to the Central office in Lansing for dispersal to the District Offices. Commercial laboratories, in contrast, forward analytical results to CWSs, who in turn, forward results to the District Offices. If District Office staff receive one total coliform positive result, the regular process is followed (i.e., send a letter requesting

repeat samples); if more than one result is total coliform positive, the District Office will telephone the system to perform an investigation. District staff generally notify the CWSs of any positive samples (for either TCR or chemicals), and follow-up with a letter informing the PWS of further actions.

District Office personnel are responsible for compliance determination and entering violations and enforcement actions into SDWIS/State. The compliance determination process is not automated. Violations and enforcements are then tracked by the MDEQ in SDWIS/State, and can be viewed statewide. Compliance is tracked by the responsible District staff. Monitoring schedules are likewise maintained by the responsible District staff. Violations are confirmed quarterly when the Central Office data manager runs compliance reports in SDWIS/State. Violation letters are generated by District staff using standard templates developed by the Central Office.

Follow-up of violations is completed by the District Offices, using a set enforcement policy. This policy may include, in order of escalation: phone calls, site visits, issuance of violation letters, and enforcement conferences.

MDEQ does not maintain any M/R or MCL requirements that are more stringent than Federal requirements. The State does, however, maintain an enforceable monitoring schedule for Phase II/V contaminants, but considers violations of the monitoring schedule to be "State" violations and does not report the violations to SDWIS/Fed.

MDEQ began issuing violations for failure to perform public notification per the new rule beginning in May of 2002. Prior to this time the State did not issue violations for failure to provide public notification. MDEQ does not issue violations for failure to perform a sanitary survey.

Southeast District Office Analytical results are received in the office in hard copy. The District Resource Analyst (RA) maintains summary sheets in Excel to help track compliance for their systems. In the case of positive TCR results or chemical detects, the District notifies the system via phone and/or mail with instructions on follow-up monitoring. Engineers will conduct on site follow-up visits if necessary.

Jackson District Office Analytical results are received in the office in hard copy. The RA maintains summary sheets in Excel to help track compliance for their systems. In the case of positive TCR results or chemical detects, the District notifies the system via phone and/or mail with instructions on follow-up monitoring. District staff will conduct on site follow-up visits if necessary.

Saginaw Bay District Office Analytical results are received in the office in hard copy. The District compliance manager logs the results into a spreadsheet program, then passes any positive results to the District engineers for further action. In the event of positive results, the engineers complete follow-up, including phone calls, and letters. Engineers will perform a follow-up visit to the system if warranted.

The District estimates that the commercial laboratories analyze approximately 70 percent of results while the State laboratory analyzes the remainder. Radiological contaminants are analyzed entirely by commercial laboratories.

Shiawassee District Office Analytical results are received in the District Office in hard copy. The RA responsible logs all results into MS Access or an Excel spreadsheet, and reviews all results for completeness. Results are then forwarded to the District engineers for further review, then filing. The RA determines compliance, assigns violations and forwards a list to the engineers for QA. The RA then generates violation letters and forwards these letters to the CWSs.

In the event of a total coliform positive result, the CWS or the laboratory will telephone the District. District personnel will investigate, determine if the sample was taken properly and inform the CWS that they must take repeat samples and five samples the following month. Five samples the following month may be waived if a site visit is performed. For chemical detects, District personnel will contact the CWS by phone, request a check sample, and if needed, quarterly sampling will be required.

The State laboratory completes the majority of analyses for this District. Approximately one-half of the bacteriological and lead/copper analyses are completed by the State laboratory. Radiological samples are completed by certified laboratories outside the State.

SDWIS/Fed Submittals MDEQ submits violations to SDWIS/Fed on a system basis. Violation and enforcement data are transferred to SDWIS/Fed via direct migration to the Regional mainframe, and the Regional SDWIS/Fed coordinator then uploads the data to SDWIS/Fed. Updates are provided quarterly for inventory, violations, and enforcements using the total replace method. The State receives error reports and resolves them immediately if they are major errors, or during the next quarter's upload if they are minor errors. MDEQ does not experience any major problems with uploads to SDWIS/Fed.

MDEQ has the following concerns regarding data management:

- Complexity in the new and upcoming rules and reporting requirements;
- Lack of electronic transfer of analytical results from laboratories (although MDEQ hopes to remedy this soon); and,
- Information technology (IT) staff reside in a different department than the drinking water program, and their assistance is difficult to requisition at times.

Saginaw Bay District Office This office has concerns that the recent reorganization of the District Offices will severely affect the District's ability to perform sanitary surveys to the current goal.

IV. Inventory Data

A. Inventory Reporting Process

Inventory information is maintained in the MDEQ's SDWIS/State database. Inventory information may also be found in hard copy files maintained by the District Offices. The DV team reviewed primarily the most recent sanitary survey data contained in the database. If the MDEQ database and SDWIS/Fed agreed (or were within ten percent), no discrepancy was recorded.

Inventory information is updated when MDEQ field staff perform sanitary surveys, or water system evaluations. Population and service connection information is derived from the sanitary surveys, however if accurate population information is unavailable, a multiplier of 2.5 times service connections is used. This multiplier may be adjusted per individual circumstances. Updates of inventory information are the responsibility of the District Offices.

MDEQ's goal for conducting sanitary surveys is every three years for all CWSs and every five years for surface water systems. MDEQ has made significant improvements recently in meeting these goals, but improvement varies among Districts. MDEQ does not assign violations for not completing a sanitary survey every five years since State personnel perform the sanitary surveys.

Consumer Confidence Reports (CCR) MDEQ has interim primacy for the CCR rule. While each District Office submitted violations for the CCR, there were no discrepancies noted by the DV team in any of the District Offices.

Revised SDWIS/Fed Inventory Reporting Requirements as of January 1, 2000 For each public water system, States are required to report inventory information that describes it in some manner, that meets a programmatic need (e.g., grant eligibility requirement), or is operationally required by SDWIS/Fed to process the data (registration requirement). These data are called the "Core Data Set," and provide the minimum data set needed for EPA functions. For a description of Revised Inventory Reporting Requirements, please see *Safe Drinking Water Information System (SDWIS/Fed) Fact Sheet: Revised Inventory Reporting Requirements, June 1998.*

Traditionally, DVs reviewed system name, address of responsible person, population served, service connections, system type and activity status, and source information. Discrepancies will still be given for individual systems that have inconsistencies for these inventory elements. As of CY2001, additional elements have been added to the DV methodology, including:

- owner type;
- geographic area, including all FIPS county codes and cities served;
- locational data, including physical address for treatment plant (or latitude and longitude if physical address is not reported by 1/1/2000 for CWSs) and latitude and longitude for

each source, plus method, accuracy, and description codes (MAD) for collecting latitude and longitude;
- service areas, e.g., residential, school, day care center; and
- type of treatment applied for each source or facility and for purchased sources, the seller's treatment status.

For these additional inventory elements, a different review methodology was employed. The DV team produced a series of reports from SDWIS/Fed that show, for each system and for the entire State, 1) the grant eligibility and withholding requirements and 2) a summary page to this report that shows the number of systems with data in these fields in SDWIS/Fed. The team determined which data were reported, and asked the State to review their data collection method. If data were missing, the team obtained the State's schedule for reporting the missing information. This information is summarized below, but discrepancies are not issued for this information. The DV team only asks the State to provide a explanation of and schedule for providing the missing information to SDWIS/Fed.

The following table is a summary of MDEQ's reporting of grant withholding and eligibility requirements for community water systems.

Table 5. Summary of Grant Eligibility and Grant Withholding for Michigan

System Type	Total Systems	Number of Active Current Systems	Systems that are Grant Eligible		Number of Active Systems **	Systems Meeting Requirements for Grant Withholding	
			Systems	%		Systems	%
CWSs	1,474	1,468	1,460	99.5% *	1,474	414	28.1%

*Grant eligibility is determined based on numbers of systems that are both active and in the current inventory.
**Grant withholding is calculated based on total active systems.

Some systems failed to meet the grant withholding requirements, and therefore are subject to grant withholding. The following requirements were not met:

- A few systems are missing parts of their mailing addresses (street, city, state, or zip code).
- Many systems are missing addresses and/or latitude/longitude coordinates for treatment plants.
- Many systems are missing latitude/longitude coordinates for sources of water (e.g., wells).
- Many systems do not have values of Yes or No (Y/N) for the source and/or seller treatment status flags for all of their sources. (For Community Water Systems, the treatment status flag must be Y/N for all sources.)
- Some systems are missing FIPS county served.
- One system is missing owner type.

MDEQ is currently working with EPA Headquarters to submit missing latitude/longitude data to SDWIS/Fed, although the State cites other priorities as well. For source information, MDEQ believes that the bulk of the information should be submitted to SDWIS/Fed by the end of 2002, with treatment plant information to follow. In comments on the draft report, the State indicated that they are approximately 75 percent complete in submission of the previously mentioned information. MDEQ hopes to complete the grant withholding and eligibility requirements after an anticipated upgrade to SDWIS/State 8.0 is installed.

B. Inventory Discrepancies

The DV team compared MDEQ data to SDWIS/Fed for a total of 75 CWSs (see Table 1) for system name, name and address of administrative contact, PWSID number, population, service connections, type of system, status (active/inactive), source, and owner type.

Please see Table 3A for a list of inventory discrepancies listed by District Office. Population and service connection discrepancies accounted for the majority of discrepancies in each office.

For a system-specific listing of name and address discrepancies, refer to Exhibit 1. For all other inventory discrepancies, refer to Exhibit 2. For sanitary survey data discrepancies, refer to Exhibit 3. For CCR discrepancies, refer to Exhibit 4.

Recommendations

- All Districts may wish to develop a more efficient process for transferral of inventory population and service connection information from sanitary surveys or other source information to SDWIS/State.

V. Total Coliform Rule Data

A. TCR Reporting Process

TCR data flow and compliance determination has already been described in Section III - State Data Flow.

Repeat samples required after a TCR positive result are required by regulation to be taken within 24 hours following notification of a positive result. The requirement to collect five samples in the month following a positive result may be waived if District personnel perform a site visit and determine a resolution to the problem. If a TCR positive sample result is invalidated, a letter explaining the invalidation is placed in the hard copy files.

The MDEQ has implemented a unique TCR policy in the Detroit area concerning compliance determination and monitoring since the late 1970s when the State was awarded primacy for the drinking water program. Prior to 1997, TCR results for the City of Detroit (MI0001800) and all consecutive systems purchasing water from the City of Detroit were combined, as described under 40 CFR 141.29, to determine whether more than five percent of sample results were coliform positive [40 CFR 141.63(a)(1)]. As a result of the Data Verification visit in 1995 and discussions with EPA Region 5, the MDEQ informed these systems in March 1997 that compliance would now be determined on an individual system basis, which the State deems more stringent than 40 CFR 141.29.

The State policy also allows the consecutive systems to collect only 20 percent of the Federally required number of samples. For instance, the City of Warren (MI0006900) with a population of 144,864 should collect 120 TCR samples per month. Since this system purchases water from the City of Detroit, and falls under this policy, the system currently only collects 24 TCR samples per month. The team did not issue discrepancies for this policy, as it has been approved by EPA Region 5 in the late 1970s. Unfortunately, no written documentation could be found at the Region or the State to document the thought processes or the science that were used to develop this policy that allows these consecutive systems to take only 20 percent of the Federally required number of samples. EPA Region 5 has agreed to revisit the TCR policy to ensure that it adequately protects public health. See Appendix E for documentation of this policy.

The State also provided the following clarification: all systems that purchase water from Detroit are under the consecutive system agreement for TCR. This includes those systems in the Southeast District Office and in Washtenaw County (Ypsilanti Community Utility Authority) and Monroe County (Ash Township, South Rockwood, et. al.) that are regulated by the Jackson District staff. Some systems complete more than the 20 percent value of TCR samples, but have the number listed on their sampling site plan. This policy does not extend to systems that purchase water from suppliers other than Detroit. For example, Scio Township purchases from the city of Ann Arbor, but takes the full chart value of TCR samples based on its population.

B. TCR Discrepancies

The DV team reviewed the State database for TCR data collected from April 1, 2001 through March 31, 2002 for 75 CWSs. Please see Exhibit 5 for a list of TCR discrepancies.

Recommendations

Southeast District Office

- None.

Jackson District Office

- None.

Saginaw Bay District Office

- None.

Shiawassee District Office

- If the District intends to allow Sparrow Health Care (MI0063477) to remain on a quarterly TCR sampling schedule, this decision should be documented in the files, as per Federal regulation for CWS sampling frequencies.

VI. Phase II/V Rule

A. Notes Regarding Phase II/V Rule Review Methodology

Beginning with DVs conducted in the calendar year 1999, the team did not examine data for the 1993-1995 initial compliance period for the Phase II and V rules. The team reviewed only data and actions from the most recent compliance period of 1999-2001 for the Phase II and V rules. The review did not determine whether waivers were issued or grandfathered data accepted properly, and the team calculated compliance based on the schedule for monitoring established by the State for that compliance period.

B. Phase II/V Rule Reporting Process

Phase II/V data flow and compliance determination has already been described in Section III. State-wide waivers are in effect for asbestos, dioxin, EDB, DBCP, adipate, phthalate, diquat, endothall, glyphosate, and dalapon.

Michigan issues Phase II/V waivers to systems on the basis of whether a system uses groundwater or surface water sources, or whether they have an approved wellhead program and a vulnerability assessment (both of which may include testing for the presence of tritium in groundwater). See Appendix C for a description of the State's waiver program. PWSs do not request waivers, but are granted waivers after evaluation of an approved wellhead delineation program or vulnerability assessments are completed. The following paragraphs describe MDEQ's waiver strategy.

IOCs A Statewide waiver is in effect for asbestos. "Partial chems" include nitrate, which must be sampled annually, nitrite once every three years, and fluoride once per year for surface water and every three years for ground water. Sampling for "Limited metals" (antimony, beryllium, nickel, and thallium)

and "Complete metals" (all regulated metals including "limited metals") may be waived to once every nine years if the CWS has three previous acceptable samples on file. Cyanide may be waived if the CWS chlorinates its water.

VOC's All CWSs sample at the Federal frequency. Six year waivers are not available.

SOCs Statewide waivers are in effect for dioxin, glyphosate, endothall, diquat, adipate, and phthalate. These statewide waivers were generally based on specialized sampling early in the Phase II/V process, which yielded no detects of the waived chemicals.

Groundwater systems serving fewer than 10,000 persons are waived from monitoring for EDB, DBCP, and dalapon. If a PWS has no "coal tar lining" (i.e., cast iron piping) in its distribution system, they are waived from monitoring for benzo(a)pyrene. See Table 6 for a further explanation.

The State also allows testing for tritium to be a factor in the granting of reduced sampling. MDEQ's waiver policy states that, as there was no tritium in the atmosphere (and therefore the water table) before the 1950s, the absence of tritium in water samples indicates that groundwater is "old" and therefore uncontaminated. The use of this policy allows new systems with an approved wellhead delineation or "low" tritium (less than 1.0 mg/L) to forego quarterly monitoring for VOCs and be allowed to reduce sampling to once per three years, if analytical results for the first VOC sample are all below the detection limit.

Southeast District Office Annual monitoring schedules were present in the files. If a CWS has not monitored by the date set out in the schedule, the District personnel telephone them, then follow up with a letter. Monitoring compliance due dates are generally set at the end of September rather than the end of December to accommodate the State laboratory workload and year-end holidays.

Jackson District Office Annual monitoring schedules were present in the files. If a CWS has not monitored by the date set out in the schedule, the District personnel telephone them, then follow up with a letter. Monitoring compliance due dates are generally set at the end of September rather than the end of December to accommodate the State laboratory workload and year-end holidays.

Saginaw Bay District Office Annual monitoring schedules were present in the files. District engineers review the schedules before they are sent to the CWSs. If a CWS has not monitored by the date set out in the schedule, the District personnel telephone them, then follow up with a letter. Monitoring compliance due dates are generally set at the end of September rather than the end of December to accommodate the State laboratory workload and year-end holidays.

Shiawassee District Office Annual monitoring schedules are provided to CWSs to assist in scheduling chemical monitoring. Waiver information is included in the schedules, and scheduling and waiver information was present in the files. Monitoring compliance due dates are generally set at the end

Table 6. MDEQ Waiver Program

CHEMICAL MONITORING
COMMUNITY WATER SYSTEMS
1/27/97 Revision

	GW sources with approved wellhead delineation (or tritium less than 1.0)	GW sources serving less than 10,001 people and no approved wellhead delineation	GW sources serving greater than 10,000 people and no approved wellhead delineation	SW sources - Least Vulnerable (most sw systems)	SW sources - Moderately Vulnerable (1)	SW sources -Highly Vulnerable (2)
Partial Chem (A)	1/ yr	1/ yr	1/ yr	1/ yr	1/ yr	1 yr
Lim Mtls *	1/3 yr	1/3 yr	1/3 yr	1/ yr	1/ yr	1/ yr
Cmp Mtls *	1/3 yr	1/3 yr	1/3 yr	1/ yr	1/ yr	1/ yr
VOC (B)	1/3 yr	1/3 yr	1/3 yr	1/ yr	1/ yr	1/ yr
Lim SOC (C)	NA	1/3 yr	NA	1/3 yr	2/3 yr ****	NA
Exp SOC (D)	NA	NA	Quarterly ***	NA	NA	Quarterly
CN **	1/3 yr	1/3 yr	1/3 yr	NA	NA	NA
Radiological	1/4 yr	1/4 yr	1/4 yr	1/4 yr	1/4 yr	1/4 yr
Tritium (E)	1/3 yr	NA	NA	NA	NA	NA

* Can reduce to 1/9 yrs if have 3 rounds of samples on file. (Lim Mtls includes Antimony, Beryllium, Nickel & Thallium). (Cmp Mtls includes all regulated metals, including Lim Mtls).

** Can reduce to 1/9 yrs if have 3 samples on file. Not required for chlorinated sources.

*** Quarterly for one year then 1/3 yrs if no detects.

**** Collect two samples over a three year period during the 2nd and 3rd quarters of one year.

(1) Includes Bay City, St. Clair & Detroit Rivers, Monroe, Frenchtown, St. Joe, Benton Harbor.

(2) Includes all inland river supplies.

(A) Partial Chem covers the following monitoring requirements:
Nitrate - once per year (Must have 1 yr of quarterly samples on file for SW sources).
Nitrite - once per 3 years (Quarterly if greater than 50% of MCL; State discretion if less than 50%)
Fluoride - once per year for SW supplies; once per 3 years for GW supplies.

(B) If detects, quarterly monitoring required plus monitoring for EDB and DBCP.

(C) Lim SOC includes CXPT, CXHB, & CXLP scans.

(D) Exp SOC includes Lim SOC plus EDB, DBCP, Glyphosate, Endothall, Diquat and Dalapon. (Glyphosate is not required for chlorinated sources).

(E) Tritium monitoring required only for those supplies which are on reduced monitoring due to tritium <1.0.

Above monitoring requirements represent a revision of the 4/2/93 monitoring table and take into account the revisions of the Reauthorized Michigan Safe Drinking Water Act. Further monitoring revisions may be forthcoming. Modifications of the above monitoring schedule may be appropriate in unique situations and can be adopted with the approval of Mike Kovach, Elgar Brown, or Richard Sacks.

of September rather than the end of December to accommodate the State laboratory workload and year-end holidays.

C. Phase II/V Rule Discrepancies

The DV team reviewed the State database for IOCs, VOCs, and SOCs for the compliance period January 1, 1999 through December 31, 2001; nitrates were reviewed for calendar years 2000 and 2001; For Bay City, nine CWSs were reviewed for nitrate, IOC, VOC, and SOC discrepancies. For Shiawassee, 15 CWSs were reviewed for nitrate, IOC, VOC, and SOC discrepancies. For Jackson, 15 CWSs were reviewed for nitrate, IOC, VOC, and SOC discrepancies. For Livonia, nine CWSs were reviewed for nitrate , IOC, VOC, and SOC discrepancies. Overall, compliance is excellent for the Phase II/V Rule contaminants; there were very few discrepancies.

Jackson District Office One CWS failed to conduct quarterly monitoring after a detect or exceedance of a trigger level for VOCs and no violation was assigned.

Livonia District Office No discrepancies were identified.

Saginaw Bay District Office No discrepancies were identified.

Shiawassee District Office One CWS was missing nitrate data for 2001 and no violation was assigned.

For a system-specific listing of Phase II/V discrepancies by contaminant group, refer to Exhibit 6 for nitrate and nitrite, Exhibit 7 for IOCs, Exhibit 8 for VOCs, and Exhibit 9 for SOCs.

Recommendations

Jackson District Office

- The District Office should carefully track all detects and trigger levels, encourage PWSs to perform adequate sampling to determine "reliably and consistently below the MCL," and assign violations if such monitoring is not completed.

Saginaw Bay District Office

- None.

Shiawassee District Office

- District should assign a monitoring and reporting violation to CWSs who have not completed annual nitrate monitoring.

VII. Total Trihalomethanes

A. Total Trihalomethanes Reporting Process

The reporting and data management process for Total Trihalomethanes is the same as for the Phase II/V chemicals. M/R and MCL violations are determined in the same manner as the Phase II/V chemicals.

B. Total Trihalomethanes Discrepancies

The DV team reviewed the State database for TTHMs for the compliance period July 1, 2001 through June 30, 2002. One CWS in the Shiawassee Office and six CWSs in the Livonia Office were reviewed for TTHM discrepancies. No discrepancies were identified.

Recommendations

- None

VIII. Radiological Contaminants

A. Radiological Reporting Process

Radiological data flow and compliance determination has already been described in Section III.

During the previous data verification (April 1997) the data verification team noted that, although not permitted by the Federal regulation, in an informal agreement with Region 5 in 1988, the State waived monitoring for radionuclides subsequent to the initial round of monitoring. Due to financial constraints and staff reductions, this initial sampling was conducted over a 10-year period (FY77-FY87). In FY 1994, the Region communicated its concern that radionuclide resampling be resumed as soon as possible in Michigan, in the interest of public health. The State proposed to conduct radionuclide sampling over a four-year period, from FY 1995 through FY 1998.

Region 5 agreed with MDEQ's 1995 proposed monitoring strategy. The strategy allowed one grab sample at each entry point to the distribution system instead of quarterly monitoring for new systems. Existing systems that had been previously sampled for radionuclides were required to perform radionuclide monitoring in 1995-1998; all existing CWSs were required to monitor once during this period, then proceed on a "one sample every four years" schedule.

The team checked to determine if radiological sampling (if applicable) was completed for the CWSs in the samples during the 1995-1998 period. The team then looked for sampling in the subsequent

period of 1999-2002. For example, if a CWS sampled in 1996, then the team checked that it had also sampled in 2000.

B. Radiological Discrepancies

Prior to 1995, MDEQ had not been sampling radiological contaminants in accordance with the Federal and Regional policy. Region 5 instructed MDEQ to perform four quarters of gross alpha sampling for all CWSs with previous gross alpha results greater than 5 pCi/L. MDEQ is now requiring a three-year sampling cycle for all radiological sampling.

Southeast District Office No discrepancies were identified.

Jackson District Office One nursing home collected a radiological sample in 1997, but failed to collect a sample in 2001, and no violation was reported and a discrepancy was issued for this system. As noted earlier in the report, purview of nursing homes was just provided to MDEQ, and the State plans on scheduling a radiological sample for this system immediately.

Saginaw Bay District Office The team was informed that, in some cases, due to personnel issues, only one recent radiological sampling result may be available for review. However, the team was later provided with analytical results that removed all but one discrepancy.

Shiawassee District Office No discrepancies were identified.

Recommendations

- None.

IX. Lead and Copper Data

A. Notes Regarding Lead and Copper Rule Review Methodology

During DVs conducted over the past several years, several issues regarding implementation of the LCR were raised. For example, EPA has changed policies since initial implementation of the rule, such as criteria for returning a system to compliance after a monitoring violation, so the teams have found different policies in States over this issue. Recognizing the difficulty of resolving some remaining questions about implementation and reporting requirements for the LCR, the following approach has been developed to characterize implementation in the DV reports. The Team will review the two most recent samples collected for the systems in the sample. An additional set of systems — 5 CWSs (if available) in each District Office — will be selected that are new since approximately 1996. Those systems will be reviewed for initial compliance. The review will be the same as for the other regulations,

relying on the most current implementation guidance. All monitoring dates, milestones, violations, and enforcement actions are recorded on the data collection forms, and missing data are noted.

However, the number of data flow and compliance determination discrepancies will not be counted as they are for the other regulations. This report includes some data for the LCR in a separate table in the Executive Summary. And, unlike the exhibits for the other rules, the LCR exhibits do not describe all missing information in detail. Instead, the exhibit identifies some of the most critical monitoring and milestone activities that must be performed for the LCR and names the systems that failed to complete them. Some additional explanation, such as the year or month of the violation, will be noted.

In the LCR section of this report, the team makes general observations about implementation and enforcement. Patterns detected by the team are noted, and individual cases may be highlighted if they support the conclusions and recommendations. The data flow for the LCR is explained, with emphasis on those areas where the State may not be following up with the system or reporting to their State database or SDWIS/Fed. In some cases, the team may note where the State needs to make changes in their implementation approach to comply with the LCR Minor Rule Revisions. For example, the new reporting requirements ask that States only return systems to compliance (RTC) for an initial monitoring violation after collecting two, consecutive rounds of six-month samples. Previously, EPA guidance permitted a RTC code after only one round was collected.

These changes to the LCR section will permit the team to finalize the LCR portion of the DV report, which has been eliminated for the past two years. This method will provide Implementation staff with a snapshot of LCR implementation, plus indicate the scope of the problems found. It also outlines issues for the Data Management staff. While the data will not be as precise as the information presented for other rules, the numbers should still help focus energy and funding on improvements.

B. Lead and Copper Reporting Process

Most PWSs began monitoring for the LCR according to the Federal schedule in 1992. The State notes, however, that, based upon the regulation itself and the preamble, the State considers a single building to constitute a single site, whereas EPA Headquarters interprets the LCR to mean that a site is a faucet. This difference in interpretation means that at systems with less than five buildings, the system takes less than the minimum number of samples. This issue was not addressed in the LCRMR, so in the LCRMR Implementation agreement and the LCRMR Extension Agreement, the State agreed to require systems to take a minimum number of five samples regardless of whether they had at least five buildings. However, the State would not agree to enforce against a system that took less than five samples if there were less than five buildings, because the State does not believe it would be enforceable. Prior to applying for LCRMR primacy, the State agreed to have the Michigan Attorney General (AG) review this issue and determine whether or not the State could enforce the minimum number of five samples per system. The AG requested information from EPA Headquarters as to why it believes that a

system is a faucet. The State is awaiting a letter from EPA Headquarters that provides explanation to this issue.

The State has been collecting data for reporting under the LCRMR, but has not yet reported the data to SDWIS/Fed. MDEQ uses the LCR (old) method for determination of compliance with optimal water quality parameters. Installation of corrosion control has been completed for all systems required to do so. MDEQ will send the most recent lead and copper data to SDWIS/Fed shortly after SDWIS/State is upgraded to version 8.0. The Michigan Department of Information Technology is working on this upgrade.

Previous policy initiated by the MDEQ allowed older apartment complexes and multi-person dwellings that did not meet Tier structure standards to forego LCR monitoring. There were approximately 200 systems affected by this policy. With the advent of the LCRMR, the State has reversed this policy and informed these systems that they must begin LCR monitoring as of January 2001.

Lead and copper results are received in hard copy from all laboratories. 90th percentile values for lead and copper are calculated by District staff who flag action-level exceedances (ALEs), and determine compliance. The State does not allow any CWS to take fewer than five LCR samples, regardless of the number of taps available.

In the event of an ALE, MDEQ staff notify the PWS by telephone, and perhaps perform a site visit, followed by a letter. The letter contains guidance for follow-up steps that need to be performed and language to be used for Public Education. A member of the MDEQ District staff reviews all treatment recommendations, studies and water quality parameters (WQPs).

Southeast District Office Systems purchasing water from the City of Detroit (MI0001800) use a modified consecutive system approach to monitoring for lead and copper. Each individual water system is required to monitor for lead and copper, but at a reduced number of sampling sites. The City of Detroit was responsible for installing corrosion control treatment systems at all five of its treatment plants, and conducted most initial water quality parameter monitoring at each individual system. Individual systems were not permitted to collect less than five tap samples in each compliance period, and systems that exceeded the lead or copper action levels were required to increase monitoring to the standard number of sites as Federally required. Individual systems would then be responsible for public education and public notification, and would be required to either alter or install additional corrosion control measures, or initiate lead service line replacement as required by the Federal regulation. The city of Detroit itself was to begin monitoring by collecting 100 tap samples, then at least 700 tap samples would be collected from consecutive systems within the Detroit Metro area. This approach was approved by EPA Region 5, and appears to be more protective of public health than Federal guidelines (systems with populations greater than 100,000 are required to collect 100 samples, and the total number of samples collected by all Detroit Metro systems far outnumber the minimum standard). Many of the consecutive systems that the team reviewed, especially systems that had a lead or copper action level exceedance in the past, collected

more tap samples than required by Federal regulations. Documentation of this policy is provided in Appendix D.

Jackson District Office See above notes for the Southeast District Office.

Saginaw Bay District Office It is usual in this office for the larger CWSs to have contracts or arrangements to perform LCR sampling for any smaller CWSs that purchase water from the parent system. One system in the District (Bay Metro Area) is now performing lead service line replacement (LSLR).

Shiawassee District Office It is usual in this office for the larger CWSs to have contracts or arrangements to perform LCR sampling for any smaller CWSs that purchase water from the parent system.

C. Lead and Copper Discrepancies

The MDEQ offices experienced an unusually low number of discrepancies for the LCR. The DV team reviewed lead and copper data for two CWSs in Bay City, four CWSs in Shiawassee, three CWSs in Jackson, and two CWSs in Livonia inserted in SDWIS/Fed in either 1996 or 1997 for initial monitoring forward, and for the two most recent samples for 16 CWSs in Bay City, 17 CWSs in Shiawassee, 15 CWSs in Jackson, and 16 CWS in Livonia. The team reviewed hard copy records. For a system-specific listing of lead and copper discrepancies, refer to Exhibit 12.

Southeast District Office One CWS failed to collect routine follow-up samples in the "summer" months of June through September.

Jackson District Office No discrepancies were identified for this office.

Saginaw Bay District Office One CWS submitted routine follow-up monitoring samples late or incorrectly.

Shiawassee District Office One CWS had an incorrect or missing violation in SDWIS/Fed, likely caused by incorrect submission of a violation end date; correction will be submitted with the next SDWIS/Fed upload. One CWS failed to complete two consecutive six-month rounds of initial monitoring, had an action level exceedance that was not reported to SDWIS/Fed, and collected subsequent water quality parameters late.

Recommendations

Southeast District Office

- None

Jackson District Office

- None

Saginaw Bay District Office

- None

Shiawassee District Office

- The District should report all LCR violations regarding Orchard Place Manor Apartments (MI0005039) to SDWIS/Fed as soon as possible, and continue to monitor this CWS for compliance with the LCR.

X. Surface Water Treatment Rule Data

A. Surface Water Treatment Rule Reporting Process

Summaries of monthly operating reports (MORs) are compiled by the PWS operator and forwarded to the MDEQ District Offices. MORs are reviewed by District personnel responsible for the SWTR. If a violation exists, the system will be contacted by phone or District personnel will make a site visit and make recommendations to correct the problem. If the problem is not corrected, then enforcement actions will be taken.

The State requires all systems to filter, and groundwater under the direct influence of surface water (GWUDI) determinations have been completed and are continually reviewed when site visits are made.

B. Surface Water Treatment Rule Discrepancies

The team reviewed the database and hard copy summaries for one surface water system in the Jackson District Office, two surface systems in the Livonia District Office, and two surface systems in the Saginaw Bay District Office; no discrepancies were found.

Recommendations

- None.

XI. Enforcement Action Data

A. Enforcement Action Procedure

MDEQ has administrative, civil, and criminal enforcement authority, including the ability to levee fines. The State has an interim formal, escalating enforcement policy that is currently under review by Region 5, which should be completed by the end of 2002. The State's escalation policy is described below (and in Appendix F). Warning/Reminder letters are informal actions while formal actions include:

- Notice of Violation (NOV) and request for public notification. May include informal compliance conference;
- Administrative Order (AO). CWS may request a Departmental contested case hearing; and,
- Referral to the States' Attorney General for civil or criminal charges.

Request for and Receipt of Public Notice Beginning in the year 2001, the DV team began confirming that PN was requested and received for all violations relevant to the compliance periods reviewed. The team conducts the PN review to ensure that PN requested is received by the State within the specified time period and if PN is not received, that violations are assigned for failure to provide PN.

The team reviewed hard copy and database records for PN. MDEQ does assign violations for failure to complete PN.

B. Enforcement Action /Public Notification Discrepancies

The DV team reviewed hard copy files for "formal" enforcement actions which are actions that are required to be reported to SDWIS/Fed. The DV team did not review any Federal enforcement actions or PN that may have been initiated or tracked by EPA Regional offices. All enforcement actions related to the Lead and Copper rule are discussed in section IX of this report. No enforcement action or public notification discrepancies were identified.

Recommendations

- None.

The DV team hopes that the findings and recommendations outlined in this report will be of use to MDEQ in improving data reporting and tracking methods.

Appendix A

Data Verification Discrepancy Definitions

DATA VERIFICATION DISCREPANCY DEFINITIONS

There are two types of discrepancies: data flow discrepancies and compliance determination discrepancies. Data flow discrepancies are violations of National Primary Drinking Water Regulations that are detected by the State, but are not forwarded to SDWIS/Fed. The team knows that the State detected the violation when it finds correspondence with the system, enforcement actions, or violations in the State database. Data flow discrepancies also occur when the State incorrectly reports the violation to SDWIS/Fed, such as incorrectly coding a violation. Compliance determination discrepancies occur when the State did not detect a violation or reports a violation to SDWIS/Fed that was not substantiated by information contained in the State files or database. The following is a complete list of the types of discrepancies identified by the team and their definitions.

Inventory -- A discrepancy exists if there is a difference between the State data and the data in the SDWIS/Fed 35 report. Inventory data reviewed include:

System Type — Community Water System (CWS), Nontransient Noncommunity Water System (NTNCWS), or Transient Noncommunity Water System (TNCWS).

System Status — Active or Inactive.

Source — Ground Water (GW), Purchased Ground Water (GWP), Surface Water (SW), or Purchased Surface Water (SWP), Ground Water Under the Direct Influence of Surface Water (GUDI) and Purchased Ground Water Under the Direct Influence of Surface Water (PGUDI).

Population and Service Connections — a discrepancy is recorded if the difference between State and SDWIS/Fed data is greater than ten percent, or affects a system's monitoring requirements.

Address, Name, PWSID — address discrepancies are determined from the primary address field.

Owner Type — Federal Government (F), Private (P), State Government (S), Local Government (L), Mixed Public/Private (M), Native American (N).

Sanitary survey — a discrepancy is issued if surveys are not conducted every five years and no '28' violation is issued by the State and submitted to SDWIS/Fed.

Consumer Confidence Report (CCR) — a discrepancy is recorded if a CCR is not received by July of the appropriate year and a violation is not properly assigned by the State and submitted to SDWIS/Fed.

For the remaining elements reviewed during the DV, there are two types of discrepancies noted. The first type are instances where the State files and SDWIS/Fed do not agree, or data flow discrepancies. The second type are compliance determination discrepancies. These discrepancies are either instances where the State overlooked a violation, or when the DV team determines that the State is not following the Federal regulations, its approved primacy package, or another policy approved by the EPA Region. The report will itemize both types of discrepancies.

TCR, Phase II/V, Radiologicals, and TTHMs — For monitoring and reporting (M/R) and maximum contaminant level (MCL) violations, discrepancies are generally of two types: (1) evidence of a violation in the State data that is not recorded in SDWIS/Fed, or; (2) a violation in SDWIS/Fed which is not supported by State data.

LCR — In addition to M/R discrepancies under the Lead and Copper Rule, milestone and treatment technique discrepancies are also noted. Milestones are important system events, such as a lead exceedance (PB90) or copper exceedance (CU90), that are SDWIS/Fed reporting requirements. Treatment techniques include steps that a system is required to take following a lead or copper exceedance to ensure public safety and show compliance with the LCR (e.g., public education or corrosion control study).

SWTR — Discrepancies include: M/R, treatment technique, or filtration status. Treatment techniques refer to turbidity and disinfection residual level requirements under the SWTR. Filtration status indicates whether a system has a filtration plant on line, if the system is filtered or whether the system is in the process of installing filtration.

Enforcement Actions — Enforcement action discrepancies are recorded when an enforcement action is found either only in SDWIS/Fed or only in the State files, or when the dates on the enforcement actions differ by more than a month. Public notification discrepancies are recorded when a violation is found in SDWIS/Fed or the State files, but proof of public notice has not been forwarded to the State by the system and no violation has been assigned.

Reason Codes

Code	Description	CD or DF?	Examples	Rule
A	No sample data; no violation assigned	CD	May include missing analytical results, sanitary surveys, or consumer confidence reports	All
B	No sample because system incorrectly classified	CD	System has wrong population or source type; listed as wrong system type (e.g., CWS, NTNCWS, TNCWS)	All
C	State policy not approved in writing by Region	CD	Texas nitrite waivers, lab capacity issues forces State to give extensions, don't give vios if State is responsible for monitoring	All
D	Late implementation without written approval by Region	CD		All
E	Violation in State database not reported to SDWIS/FED	DF	State has done accurate compliance determination, entered vio into their database, but hasn't successfully transmitted them to SDWIS/FED. Possibly because of problems during data submission to SDWIS/FED.	All
F	Violation assigned by State and not confirmed by DV Team	CD	Team finds samples and can't figure out why vio was assigned	All
G	Incorrect information entered into database, e.g., violation type 23 reported when type 24 occurred	CD	State is confused about correct coding	All
H	Typo: correct compliance determination but wrong data entered	DF		All
I	Rescinded violation not removed from State database and/or SDWIS/FED	DF	Usually we see it removed from State database and State forgets to remove violation from SDWIS	All
J	Incorrect sampling/analytical procedure	CD	Collecting all TCR samples on same day from same site; using raw water; exceeded holding time; lab not certified for method;	All
K	Incorrect MCL or failure to assign vio	CD	Both determination or failure to assign violation altogether. For TCR (e.g., distinguishing between acute and monthly) or chems/rads (not calculating running average correctly). For LCR, exceed PB or CU maximum permissible limits (MPLs)	All
L	Insufficient number of samples taken	CD	Insufficient number of routine samples taken, too few repeats after TC +, failure to increase to 5 in following month, didn't take turbidity every four hrs. For LCR, not enough initial, follow-up, or WQP samples taken.	TCR SWTR LCR
M	Incorrect Treatment Technique violation determination or failure to assign vio	CD	State didn't detect system had too many samples above/below the threshold for turbidity and disinfectant residual, respectively. LCR-WQP entry point or tap treatment technique vio.	TCR SWTR LCR
N	Insufficient quarterly monitoring conducted after detect/trigger	CD	Not enough samples to determine R&C	Phase II/V
O	Insufficient quarterly monitoring conducted after Chem MCL	CD	Not enough samples to determine R&C after an MCL	Phase II/V
P	No or late speciation of lab results	CD	After exceeding Gross Alpha or Radium 226 levels	Phase II/V
Q	Chem or LCR samples not taken according to schedule	CD	Either Standardized Monitoring Framework, reduced monitoring, or State waiver program. LCR - failure to sample according to Fed or state schedule.	Phase II/V LCR
R	Sample missing one or more analytes	CD	Either specific analytes or method	Phase II/V
S	Failure to assign vio	CD	Didn't submit materials (evidence of PN or certification for CCR)	PN CCR
T	Enforcement - wrong date	CD	More than 30 days difference between date in SDWIS and when we believe action was taken	All
U	Enforcement - Orphan	DF	Enforcement is not linked to a violation in SDWIS	ENF
V	Enforcement - wrong code	CD	State assigned the incorrect enforcement code	ENF
W	Insufficient quarterly monitoring for a new system	CD	Didn't take 4 consecutive quarters of samples at system start-up	Phase II/V
X	Enforcement code not in SDWIS	CD	SOX (or other) code not submitted to SDWIS	ENF
Y	LCR treatment study/recommendation/installation/ demonstration not completed on schedule	CD	System fails to complete corrosion control treatment study, recommendations, installation of treatment or demonstrate that treatment is effective on time.	LCR
Z	LCR public education not completed on schedule	CD		LCR
AA	LCR lead service line replacement not completed on schedule	CD		LCR

Appendix B

Exhibits 1-15

Exhibit 1
Name, Address, Administrative Contact and PWSID Discrepancy Report

		ADDRESS	
PWSID	SYSTEM NAME	STATE RECORDS	SDWIS
COMMUNITY WATER SYSTEMS			
MI0000635	Berlin Township	Add: 8000 Swan View	Add: 5901 Trombley Road
MI0067101	Northfield Place Nursing Home	AC Name: Melinda Hayes	AC Name: Administrator, Northfield Place
NONTRANSIENT NONCOMMUNITY WATER SYSTEMS			
Not reviewed.			
TRANSIENT NONCOMMUNITY WATER SYSTEMS			
Not reviewed.			

Exhibit 2
Inventory Discrepancy Report

PWSID	SYSTEM NAME	POPULATION		SERVICE CONNECTIONS		OWNER TYPE		TYPE OF SYSTEM		STATUS OF SYSTEM		SOURCE	
		STATE	SDWIS	STATE	SDWIS	STATE	SDWIS	STATE	SDWIS	STATE	SDWIS	STATE	SDWIS
COMMUNITY WATER SYSTEMS*													
MI0000221	Ann Arbor Township			415	305								
MI0000900	Brookside Subdivision	130	200										
MI0003692	Lake Arrowhead Estates	225	180										
MI0004006	Madison Township			1,100	750								
MI0004890	South Shore Water System					L	P						
MIoo67101	Northfield Place Nursing Home	107	190										
NONTRANSIENT NONCOMMUNITY WATER SYSTEMS													
Not reviewed.													
TRANSIENT NONCOMMUNITY WATER SYSTEMS													

Exhibit 2
Inventory Discrepancy Report

PWSID	SYSTEM NAME	POPULATION		SERVICE CONNECTIONS		OWNER TYPE		TYPE OF SYSTEM		STATUS OF SYSTEM		SOURCE	
		STATE	SDWIS	STATE	SDWIS	STATE	SDWIS	STATE	SDWIS	STATE	SDWIS	STATE	SDWIS
Not reviewed.													

CAC - Community Active Current
GU - Ground water Under the influence of Surface Water
GW - Groundwater source
GWP - purchased groundwater
L - Local Government
P - Private
ND - no discrepancy
NF - not found
STATE RECORDS - violation assigned by the State
SDWIS - violations listed in SDWIS
SW - Surface water source
SWP - Purchased surface water
TNC - Transient Noncommunity
NTNC - Nontransient Noncommunity

* The team would like to note that all inventory discrepancies identified above were corrected by the State while the team was on-site.

Exhibit 3
Sanitary Survey Discrepancy Report

PWSID	SYSTEM NAME	STATE RECORDS TYPE	STATE RECORDS DATE	VIOLATIONS SDWIS TYPE	VIOLATIONS SDWIS DATE	VIOLATIONS DV TYPE	VIOLATIONS DV DATE	COMMENTS
COMMUNITY WATER SYSTEMS								
MI0001770	Deerfield	NF	NF	NF	NF	28	1/1/96	Sanitary survey conducted on 6/25/91, expect to see another sanitary survey by 12/31/96. No violation reported to SDWIS/Fed.
NONTRANSIENT NONCOMMUNITY WATER SYSTEMS								
Not reviewed.								
TRANSIENT NONCOMMUNITY WATER SYSTEMS								
Not reviewed.								

28 - Sanitary Survey Violation, TCR
DV - violations assessed by the data verification team
M/R - Monitoring and/or Reporting Violation
ND - no discrepancy
NF - not found
SDWIS - violations listed in SDWIS
STATE RECORDS - violation assigned by the State

Exhibit 4
Consumer Confidence Report Discrepancy Report

PWSID	SYSTEM NAME	STATE RECORDS TYPE	STATE RECORDS DATE	VIOLATIONS SDWIS TYPE	VIOLATIONS SDWIS DATE	VIOLATIONS DV TYPE	VIOLATIONS DV DATE	COMMENTS
COMMUNITY WATER SYSTEMS								
No discrepancies were identified.								

7000-71 - Violation for failure to provide CCR to public or State
DV - violations assessed by the data verification team

ND - no discrepancy
NF - not found

SDWIS - violations listed in SDWIS
STATE RECORDS - violation assigned by the State

Exhibit 5
Total Coliform Rule Violation Discrepancy Report

PWSID	SYSTEM NAME	STATE RECORDS TYPE	STATE RECORDS DATE	VIOLATIONS SDWIS TYPE	VIOLATIONS SDWIS DATE	VIOLATIONS DV TYPE	VIOLATIONS DV DATE	COMMENTS
COMMUNITY WATER SYSTEMS								
No discrepancies were identified.								
NONTRANSIENT NONCOMMUNITY SYSTEMS								
Not reviewed.								
TRANSIENT NONCOMMUNITY WATER SYSTEMS								
Not reviewed.								

21 Acute TCR MCL Violation
22 Monthly TCR MCL Violation
23 M/R Routine Major
24 M/R Routine Minor
25 M/R Repeat Major
26 M/R Repeat Minor

 # cd M/R (or MCL) - a compliance determination discrepancy
 # df M/R (or MCL) - a data flow discrepancy
DV - violations assessed by the data verification team
*Q_ - Calendar quarter, 199_*

NF - not found
STATE RECORDS - violation assigned by the State
SDWIS - violations listed in SDWIS

Exhibit 6
Nitrate/Nitrite Violation Discrepancy Report

PWSID	SYSTEM NAME	STATE RECORDS TYPE	STATE RECORDS DATE	VIOLATIONS SDWIS TYPE	VIOLATIONS SDWIS DATE	VIOLATIONS DV TYPE	VIOLATIONS DV DATE	COMMENTS
COMMUNITY WATER SYSTEMS								
No discrepancies were identified.								
NONTRANSIENT NONCOMMUNITY WATER SYSTEMS								
Not reviewed.								
TRANSIENT NONCOMMUNITY WATER SYSTEMS								
Not reviewed.								

1040 - Nitrate
1041 - Nitrite
03 - M/R violation
 # cd M/R (or MCL) - a compliance determination discrepancy
 # df M/R (or MCL) - a data flow discrepancy
DV - violations assessed by the data verification team
*Q_ - Calendar quarter, 199_*
M/R - Monitoring and/or Reporting Violation
MCL - Maximum Contaminant Level Violation
NF - not found
POE - Point of Entry
STATE RECORDS - violation assigned by the State
SDWIS - violations listed in SDWIS

Exhibit 7
IOC Violation Discrepancy Report

PWSID	SYSTEM NAME	STATE RECORDS TYPE	STATE RECORDS DATE	VIOLATIONS SDWIS TYPE	VIOLATIONS SDWIS DATE	VIOLATIONS DV TYPE	VIOLATIONS DV DATE	COMMENTS
COMMUNITY WATER SYSTEMS								
No discrepancies were identified.								
NONTRANSIENT NONCOMMUNITY WATER SYSTEMS								
Not reviewed.								

03 - M/R Violation
 # cd M/R (or MCL) - a compliance determination discrepancy
 # df M/R (or MCL) - a data flow discrepancy
DV - violations assessed by the data verification team
*Q_ - Calendar quarter, 199_*
M/R - Monitoring and/or Reporting Violation
MCL - Maximum Contaminant Level Violation
NF - not found
POE - Point of Entry
STATE RECORDS - violation assigned by the State
SDWIS - violations listed in SDWIS

Exhibit 8
VOC Violation Discrepancy Report

PWSID	SYSTEM NAME	STATE RECORDS TYPE	STATE RECORDS DATE	VIOLATIONS SDWIS TYPE	VIOLATIONS SDWIS DATE	VIOLATIONS DV TYPE	VIOLATIONS DV DATE	COMMENTS	
COMMUNITY WATER SYSTEMS									
MI0005205	Parma Township	NF	NF	NF	NF	2992-03 2995-03	1/1/00 4/1/00	Total xylene (2992) and ethylbenzene (2995) were detected 11/22/99. PWS should have collected 2 additional quarters of samples to determine reliably and consistently below the MCL. Note in file indicates that PWS cleaned and painted their storage tank a week before collecting their sample, and State did not ask for repeat sampling. No violation reported to SDWIS/Fed.	2 cd M/R N
NONTRANSIENT NONCOMMUNITY SYSTEMS									
Not reviewed.									

2992 - Total Xylene
2995 - Ethylbenzene
03 - M/R Violation
cd M/R (or MCL) - a compliance determination discrepancy

df M/R (or MCL) - a data flow discrepancy
*Q_ - Calendar quarter, 199_*
M/R - Monitoring and/or Reporting Violation
MCL - Maximum Contaminant Level Violation
NF - not found

POE - Point of Entry
STATE RECORDS - violation assigned by the State
SDWIS - violations listed in SDWIS

Exhibit 9
SOC Violation Discrepancy Report

PWSID	SYSTEM NAME	STATE RECORDS TYPE	STATE RECORDS DATE	VIOLATIONS SDWIS TYPE	VIOLATIONS SDWIS DATE	VIOLATIONS DV TYPE	VIOLATIONS DV DATE	COMMENTS
COMMUNITY WATER SYSTEMS								
No discrepancies were identified.								
NONTRANSIENT NONCOMMUNITY WATER SYSTEMS								
Not reviewed.								

 # cd M/R (or MCL) - a compliance determination discrepancy
 # df M/R (or MCL) - a data flow discrepancy

*Q_ - Calendar quarter, 199_*
M/R - Monitoring and/or Reporting Violation
MCL - Maximum Contaminant Level Violation
NF - not found

POE - Point of Entry
STATE RECORDS - violation assigned by the State
SDWIS - violations listed in SDWIS

Exhibit 10
Total Trihalomethanes Violation Discrepancy Report

PWSID	SYSTEM NAME	STATE RECORDS TYPE	STATE RECORDS DATE	VIOLATIONS SDWIS TYPE	VIOLATIONS SDWIS DATE	VIOLATIONS DV TYPE	VIOLATIONS DV DATE	COMMENTS
COMMUNITY WATER SYSTEMS								
No discrepancies were identified.								

 # cd M/R (or MCL) - a compliance determination discrepancy
 # df M/R (or MCL) - a data flow discrepancy
DV - violations assessed by the data verification team
*Q_ - Calendar quarter, 199_*
M/R - Monitoring and/or Reporting Violation
MCL - Maximum Contaminant Level Violation
NF - not found
POE - Point of Entry
STATE RECORDS - violation assigned by the State
SDWIS - violations listed in SDWIS

Exhibit 11
Radiological Violation Discrepancy Report

PWSID	SYSTEM NAME	STATE RECORDS VIOLATIONS TYPE	STATE RECORDS VIOLATIONS DATE	SDWIS VIOLATIONS TYPE	SDWIS VIOLATIONS DATE	DV VIOLATIONS TYPE	DV VIOLATIONS DATE	COMMENTS	
COMMUNITY WATER SYSTEMS									
MI0067101	Northfield Place Nursing Home	NF	NF	NF	NF	4000 03	1/1/01	Rads sample last collected 10/9/97. Expect to see one sample every four years; sample due by 12/31/01. No violation reported to SDWIS/Fed.	1 cd M/R A

4000 - Gross Alpha
03 - M/R Violation
 # cd M/R (or MCL) - a compliance determination discrepancy
 # df M/R (or MCL) - a data flow discrepancy
DV - violations assessed by the data verification team
*Q_ - Calendar quarter, 199_*
M/R - Monitoring and/or Reporting Violation
MCL - Maximum Contaminant Level Violation
NF - not found
POE - Point of Entry
STATE RECORDS - violation assigned by the State
SDWIS - violations listed in SDWIS

Exhibit 12
Lead and Copper Rule Violation Discrepancy Report

PWSID	SYSTEM NAME	REQUIREMENT	VIOLATION CODE	DISCREPANCY TYPE	COMMENTS
COMMUNITY WATER SYSTEMS					
No discrepancies were identified.					
NONTRANSIENT NONCOMMUNITY WATER SYSTEMS					
Not reviewed.					

Exhibit 13
Surface Water Treatment Rule Violation Discrepancy Report

PWSID	SYSTEM NAME	STATE RECORDS TYPE	STATE RECORDS DATE	VIOLATIONS SDWIS TYPE	VIOLATIONS SDWIS DATE	VIOLATIONS DV TYPE	VIOLATIONS DV DATE	COMMENTS
COMMUNITY WATER SYSTEMS								
No discrepancies were identified.								
NONTRANSIENT NONCOMMUNITY WATER SYSTEMS								
Not reviewed.								
TRANSIENT NONCOMMUNITY WATER SYSTEMS								
Not reviewed.								

 # cd M/R (or MCL) - a compliance determination discrepancy
 # df M/R (or MCL) - a data flow discrepancy
DV - violations assessed by the data verification team
*Q_ - Calendar quarter, 199_*
M/R - Monitoring and/or Reporting Violation
MCL - Maximum Contaminant Level Violation
NF - not found
POE - Point of Entry
STATE RECORDS - violation assigned by the State
SDWIS - violations listed in SDWIS

Exhibit 14
Enforcement Violation Discrepancy Report

PWSID	SYSTEM NAME	STATE RECORDS TYPE	STATE RECORDS DATE	SDWIS TYPE	SDWIS DATE	DV TYPE	DV DATE	Related Violation and Date	COMMENTS
COMMUNITY WATER SYSTEMS									
No discrepancies were identified.									
NONTRANSIENT NONCOMMUNITY WATER SYSTEMS									
Not reviewed.									
TRANSIENT NONCOMMUNITY WATER SYSTEMS									
Not reviewed.									

 # cd M/R (or MCL) - a compliance determination discrepancy
 # df M/R (or MCL) - a data flow discrepancy
DV - Enforcement actions assessed by the D.V. team

*Q_ - Calendar quarter, 199_*
M/R - Monitoring and/or Reporting Violation
MCL - Maximum Contaminant Level Violation
NF - not found

STATE RECORDS - Enforcement actions issued by the State
SDWIS - Enforcement actions listed in SDWIS

Exhibit 15
Public Notification Discrepancy Report

PWSID	SYSTEM NAME	STATE RECORDS TYPE	STATE RECORDS DATE	SDWIS TYPE	SDWIS DATE	DV TYPE	DV DATE	Related Violation and Date	COMMENTS
COMMUNITY WATER SYSTEMS									
No discrepancies were identified.									
NONTRANSIENT NONCOMMUNITY WATER SYSTEMS									
Not reviewed.									
TRANSIENT NONCOMMUNITY WATER SYSTEMS									
Not reviewed.									

 # cd M/R (or MCL) - a compliance determination discrepancy
 # df M/R (or MCL) - a data flow discrepancy
DV - Enforcement actions assessed by the D.V. team

*Q_ - Calendar quarter, 199_*
M/R - Monitoring and/or Reporting Violation
MCL - Maximum Contaminant Level Violation
NF - not found

PN - Public Notice
SIE - State Public Notification Requested
STATE RECORDS - Enforcement actions issued by the State
SDWIS - Enforcement actions listed in SDWIS

Exhibit 1
Name, Address, Administrative Contact and PWSID Discrepancy Report

PWSID	SYSTEM NAME	ADDRESS: STATE RECORDS	ADDRESS: SDWIS
COMMUNITY WATER SYSTEMS			
MI0002050	Ecorse	AC Name: Jack Durbin	AC Name: Charles Weber
MI0006900	Warren, City of	AC Name: Joseph Rezak	AC Name: Joseph Rezcak
MI0006915	Waters Edge	Add: 6050 Flemings Lake Road	2050 Flemings Lake Road
NONTRANSIENT NONCOMMUNITY WATER SYSTEMS			
Not reviewed.			
TRANSIENT NONCOMMUNITY WATER SYSTEMS			
Not reviewed.			

AC - Administrative Contact

Exhibit 2
Inventory Discrepancy Report

PWSID	SYSTEM NAME	POPULATION		SERVICE CONNECTIONS		OWNER TYPE		TYPE OF SYSTEM		STATUS OF SYSTEM		SOURCE	
		STATE	SDWIS	STATE	SDWIS	STATE	SDWIS	STATE	SDWIS	STATE	SDWIS	STATE	SDWIS
COMMUNITY WATER SYSTEMS*													
MI0002050	Ecorse			4,520	5,100								
MI0002910	Grosse Point Shores	2,748	3,325										
MI0003140	Highland Park			3,400	6,491								
MI0004670	New Baltimore	6,000	6,848	2,496	1,970								
MI0005035	Orion Township			5,298	1,900								
MI0006536	Tanglewood Golf Community			236	90								
MI0006696	Twin Lakes			39	11								
MI0006915	Waters Edge	NF	100	NF	100								
NONTRANSIENT NONCOMMUNITY WATER SYSTEMS													
Not reviewed.													
TRANSIENT NONCOMMUNITY WATER SYSTEMS													
Not reviewed.													

CAC - Community Active Current
GU - Ground water Under the influence of Surface Water
GW - Groundwater source
GWP - purchased groundwater
ND - no discrepancy
NF - not found
STATE RECORDS - violation assigned by the State
SDWIS - violations listed in SDWIS
SW = Surface water source
SWP - Purchased surface water
TNC - Transient Noncommunity
NTNC - Nontransient Noncommunity

* The team would like to note that all inventory discrepancies identified above were corrected by the State while the team was on-site.

Exhibit 3
Sanitary Survey Discrepancy Report

PWSID	SYSTEM NAME	STATE RECORDS TYPE	STATE RECORDS DATE	VIOLATIONS SDWIS TYPE	VIOLATIONS SDWIS DATE	VIOLATIONS DV TYPE	VIOLATIONS DV DATE	COMMENTS
COMMUNITY WATER SYSTEMS								
No discrepancies were identified.								
NONTRANSIENT NONCOMMUNITY WATER SYSTEMS								
Not reviewed.								
TRANSIENT NONCOMMUNITY WATER SYSTEMS								
Not reviewed.								

28 - Sanitary Survey Violation, TCR
DV - violations assessed by the data verification team
M/R - Monitoring and/or Reporting Violation
ND - no discrepancy
NF - not found
SDWIS - violations listed in SDWIS
STATE RECORDS - violation assigned by the State

Exhibit 4
Consumer Confidence Report Discrepancy Report

PWSID	SYSTEM NAME	STATE RECORDS TYPE	STATE RECORDS DATE	VIOLATIONS SDWIS TYPE	VIOLATIONS SDWIS DATE	VIOLATIONS DV TYPE	VIOLATIONS DV DATE	COMMENTS
COMMUNITY WATER SYSTEMS								
No discrepancies were identified.								

7000-71 - Violation for failure to provide CCR to public or State
DV - violations assessed by the data verification team

ND - no discrepancy
NF - not found

SDWIS - violations listed in SDWIS
STATE RECORDS - violation assigned by the State

Exhibit 5
Total Coliform Rule Violation Discrepancy Report

PWSID	SYSTEM NAME	STATE RECORDS TYPE	STATE RECORDS DATE	VIOLATIONS SDWIS TYPE	VIOLATIONS SDWIS DATE	VIOLATIONS DV TYPE	VIOLATIONS DV DATE	COMMENTS
COMMUNITY WATER SYSTEMS								
No discrepancies were identified.								
NONTRANSIENT NONCOMMUNITY SYSTEMS								
Not reviewed.								
TRANSIENT NONCOMMUNITY WATER SYSTEMS								
Not reviewed.								

21 Acute TCR MCL Violation
22 Monthly TCR MCL Violation
23 M/R Routine Major
24 M/R Routine Minor
25 M/R Repeat Major
26 M/R Repeat Minor

 # cd M/R (or MCL) - a compliance determination discrepancy
 # df M/R (or MCL) - a data flow discrepancy
DV - violations assessed by the data verification team
*Q_ - Calendar quarter, 199_*

NF - not found
STATE RECORDS - violation assigned by the State
SDWIS - violations listed in SDWIS

Exhibit 6
Nitrate/Nitrite Violation Discrepancy Report

PWSID	SYSTEM NAME	STATE RECORDS TYPE	STATE RECORDS DATE	VIOLATIONS SDWIS TYPE	VIOLATIONS SDWIS DATE	VIOLATIONS DV TYPE	VIOLATIONS DV DATE	COMMENTS
COMMUNITY WATER SYSTEMS								
No discrepancies were identified.								
NONTRANSIENT NONCOMMUNITY WATER SYSTEMS								
Not reviewed.								
TRANSIENT NONCOMMUNITY WATER SYSTEMS								
Not reviewed.								

1040 - Nitrate
1041 - Nitrite
03 - M/R violation
 # cd M/R (or MCL) - a compliance determination discrepancy
 # df M/R (or MCL) - a data flow discrepancy DV - violations assessed by the data verification team
*Q_ - Calendar quarter, 199_*
M/R - Monitoring and/or Reporting Violation
MCL - Maximum Contaminant Level Violation
NF - not found
POE - Point of Entry
STATE RECORDS - violation assigned by the State
SDWIS - violations listed in SDWIS

Exhibit 7
IOC Violation Discrepancy Report

PWSID	SYSTEM NAME	STATE RECORDS VIOLATIONS TYPE	STATE RECORDS VIOLATIONS DATE	SDWIS VIOLATIONS TYPE	SDWIS VIOLATIONS DATE	DV VIOLATIONS TYPE	DV VIOLATIONS DATE	COMMENTS
COMMUNITY WATER SYSTEMS								
No discrepancies were identified.								
NONTRANSIENT NONCOMMUNITY WATER SYSTEMS								
Not reviewed.								

03 - M/R Violation
 # cd M/R (or MCL) - a compliance determination discrepancy
 # df M/R (or MCL) - a data flow discrepancy
DV - violations assessed by the data verification team
*Q_ - Calendar quarter, 199_*
M/R - Monitoring and/or Reporting Violation
MCL - Maximum Contaminant Level Violation
NF - not found
POE - Point of Entry
STATE RECORDS - violation assigned by the State
SDWIS - violations listed in SDWIS

Exhibit 8
VOC Violation Discrepancy Report

PWSID	SYSTEM NAME	STATE RECORDS TYPE	STATE RECORDS DATE	VIOLATIONS SDWIS TYPE	VIOLATIONS SDWIS DATE	VIOLATIONS DV TYPE	VIOLATIONS DV DATE	COMMENTS
COMMUNITY WATER SYSTEMS								
No discrepancies were identified.								
NONTRANSIENT NONCOMMUNITY SYSTEMS								
Not reviewed.								

 # cd M/R (or MCL) - a compliance determination discrepancy
 # df M/R (or MCL) - a data flow discrepancy
*Q_ - Calendar quarter, 199_*

M/R - Monitoring and/or Reporting Violation
MCL - Maximum Contaminant Level Violation
NF - not found

POE - Point of Entry
STATE RECORDS - violation assigned by the State
SDWIS - violations listed in SDWIS

Exhibit 9
SOC Violation Discrepancy Report

PWSID	SYSTEM NAME	STATE RECORDS TYPE	STATE RECORDS DATE	VIOLATIONS SDWIS TYPE	VIOLATIONS SDWIS DATE	VIOLATIONS DV TYPE	VIOLATIONS DV DATE	COMMENTS
COMMUNITY WATER SYSTEMS								
No discrepancies were identified.								
NONTRANSIENT NONCOMMUNITY WATER SYSTEMS								
Not reviewed.								

 # cd M/R (or MCL) - a compliance determination discrepancy
 # df M/R (or MCL) - a data flow discrepancy

*Q_ - Calendar quarter, 199_*
M/R - Monitoring and/or Reporting Violation
MCL - Maximum Contaminant Level Violation
NF - not found

POE - Point of Entry
STATE RECORDS - violation assigned by the State
SDWIS - violations listed in SDWIS

Exhibit 10
Total Trihalomethanes Violation Discrepancy Report

PWSID	SYSTEM NAME	STATE RECORDS TYPE	STATE RECORDS DATE	VIOLATIONS SDWIS TYPE	VIOLATIONS SDWIS DATE	VIOLATIONS DV TYPE	VIOLATIONS DV DATE	COMMENTS
COMMUNITY WATER SYSTEMS								
No discrepancies were identified.								

 # cd M/R (or MCL) - a compliance determination discrepancy
 # df M/R (or MCL) - a data flow discrepancy
DV - violations assessed by the data verification team
*Q_ - Calendar quarter, 199_*
M/R - Monitoring and/or Reporting Violation
MCL - Maximum Contaminant Level Violation
NF - not found
POE - Point of Entry
STATE RECORDS - violation assigned by the State
SDWIS - violations listed in SDWIS

Exhibit 11
Radiological Violation Discrepancy Report

PWSID	SYSTEM NAME	STATE RECORDS TYPE	STATE RECORDS DATE	VIOLATIONS SDWIS TYPE	VIOLATIONS SDWIS DATE	VIOLATIONS DV TYPE	VIOLATIONS DV DATE	COMMENTS
COMMUNITY WATER SYSTEMS								
No discrepancies identified.								

03 - M/R Violation
 # cd M/R (or MCL) - a compliance determination discrepancy
 # df M/R (or MCL) - a data flow discrepancy
DV - violations assessed by the data verification team
*Q_ - Calendar quarter, 199_*
M/R - Monitoring and/or Reporting Violation
MCL - Maximum Contaminant Level Violation
NF - not found
POE - Point of Entry
STATE RECORDS - violation assigned by the State
SDWIS - violations listed in SDWIS

Exhibit 12
Lead and Copper Rule Violation Discrepancy Report

PWSID	SYSTEM NAME	REQUIREMENT	VIOLATION CODE	DISCREPANCY TYPE	COMMENTS
COMMUNITY WATER SYSTEMS					
MI0002050	Ecorse	Routine Follow-up Monitoring	52	Failed to Sample in Summer Months	System collected two samples in 6/00, but failed to collect remainder of samples (3) during the summer months. The team was unable to locate a sample collection date for these samples, but they were received by the laboratory on 11/28/00. Therefore, the team did not accept these samples for compliance. No "52" violation reported to SDWIS/Fed.
NONTRANSIENT NONCOMMUNITY WATER SYSTEMS					
Not reviewed.					

Exhibit 13
Surface Water Treatment Rule Violation Discrepancy Report

PWSID	SYSTEM NAME	STATE RECORDS TYPE	STATE RECORDS DATE	VIOLATIONS SDWIS TYPE	VIOLATIONS SDWIS DATE	VIOLATIONS DV TYPE	VIOLATIONS DV DATE	COMMENTS
COMMUNITY WATER SYSTEMS								
No discrepancies were identified.								
NONTRANSIENT NONCOMMUNITY WATER SYSTEMS								
Not reviewed.								
TRANSIENT NONCOMMUNITY WATER SYSTEMS								
Not reviewed.								

 # cd M/R (or MCL) - a compliance determination discrepancy
 # df M/R (or MCL) - a data flow discrepancy
DV - violations assessed by the data verification team
*Q_ - Calendar quarter, 199_*
M/R - Monitoring and/or Reporting Violation
MCL - Maximum Contaminant Level Violation
NF - not found
POE - Point of Entry
STATE RECORDS - violation assigned by the State
SDWIS - violations listed in SDWIS

Exhibit 14
Enforcement Violation Discrepancy Report

PWSID	SYSTEM NAME	STATE RECORDS TYPE	STATE RECORDS DATE	SDWIS TYPE	SDWIS DATE	DV TYPE	DV DATE	Related Violation and Date	COMMENTS
COMMUNITY WATER SYSTEMS									
No discrepancies were identified.									
NONTRANSIENT NONCOMMUNITY WATER SYSTEMS									
Not reviewed.									
TRANSIENT NONCOMMUNITY WATER SYSTEMS									
Not reviewed.									

 # cd M/R (or MCL) - a compliance determination discrepancy
 # df M/R (or MCL) - a data flow discrepancy
DV - Enforcement actions assessed by the D.V. team

*Q_ - Calendar quarter, 199_*
M/R - Monitoring and/or Reporting Violation
MCL - Maximum Contaminant Level Violation
NF - not found

STATE RECORDS - Enforcement actions issued by the State
SDWIS - Enforcement actions listed in SDWIS

Exhibit 15
Public Notification Discrepancy Report

PWSID	SYSTEM NAME	STATE RECORDS TYPE	STATE RECORDS DATE	SDWIS TYPE	SDWIS DATE	DV TYPE	DV DATE	Related Violation and Date	COMMENTS
COMMUNITY WATER SYSTEMS									
No discrepancies were identified.									
NONTRANSIENT NONCOMMUNITY WATER SYSTEMS									
Not reviewed.									
TRANSIENT NONCOMMUNITY WATER SYSTEMS									
Not reviewed.									

 # cd M/R (or MCL) - a compliance determination discrepancy
 # df M/R (or MCL) - a data flow discrepancy
DV - Enforcement actions assessed by the D.V. team
*Q_ - Calendar quarter, 199_*
M/R - Monitoring and/or Reporting Violation
MCL - Maximum Contaminant Level Violation
NF - not found
PN - Public Notice
SIE - State Public Notification Requested
STATE RECORDS - Enforcement actions issued by the State
SDWIS - Enforcement actions listed in SDWIS

Exhibit 1
Name, Address, Administrative Contact and PWSID Discrepancy Report

PWSID	SYSTEM NAME	ADDRESS	
		STATE RECORDS	SDWIS
COMMUNITY WATER SYSTEMS			
MI0003794	Larkin Township	ZIP=48640	ZIP=48642
MI0002520	Gagetown, Village of	AC=Robert McCreedy or Charles Wright	AC=Margaret Root
NONTRANSIENT NONCOMMUNITY WATER SYSTEMS			
Not reviewed.			
TRANSIENT NONCOMMUNITY WATER SYSTEMS			
Not reviewed.			

AC - Administrative Contact

Exhibit 2
Inventory Discrepancy Report

PWSID	SYSTEM NAME	POPULATION STATE	POPULATION SDWIS	SERVICE CONNECTIONS STATE	SERVICE CONNECTIONS SDWIS	OWNER TYPE STATE	OWNER TYPE SDWIS	TYPE OF SYSTEM STATE	TYPE OF SYSTEM SDWIS	STATUS OF SYSTEM STATE	STATUS OF SYSTEM SDWIS	SOURCE STATE	SOURCE SDWIS
COMMUNITY WATER SYSTEMS*													
MI0001195	Caseville Township	724 (SS) 0 (DB)	650										
MI0000355	Baldwin Township	498 (SS) 141 (DB)	141	249 (SS) 126 (DB)	126								
MI0003794	Larkin Township			469	100								
NONTRANSIENT NONCOMMUNITY WATER SYSTEMS													
Not reviewed.													
TRANSIENT NONCOMMUNITY WATER SYSTEMS													
Not reviewed.													

CAC - Community Active Current
DB = Database
GU - Ground water Under the influence of Surface Water
GW - Groundwater source
GWP - purchased groundwater
ND - no discrepancy
NF - not found
STATE RECORDS - violation assigned by the State
SDWIS - violations listed in SDWIS
SS = Sanitary Survey
SW = Surface water source
SWP - Purchased surface water
TNC - Transient Noncommunity
NTNC - Nontransient Noncommunity

* The team would like to note that all inventory discrepancies identified above were corrected by the State while the team was on-site.

Exhibit 3
Sanitary Survey Discrepancy Report

PWSID	SYSTEM NAME	STATE RECORDS TYPE	STATE RECORDS DATE	VIOLATIONS SDWIS TYPE	VIOLATIONS SDWIS DATE	VIOLATIONS DV TYPE	VIOLATIONS DV DATE	COMMENTS
COMMUNITY WATER SYSTEMS								
MI0000290	Au Sable Township	NF	NF	NF	NF	28	12/31/01	PWS had sanitary surveys 12/4/96 and 2/6/02; more than five years apart, no violation in SDWIS/Fed.
MI0003319	Huron Shore Regional Utility Authority	NF	NF	NF	NF	28	6/30/95	First sanitary survey completed 9/17/02; no previous survey, no violation assigned.
NONTRANSIENT NONCOMMUNITY WATER SYSTEMS								
Not reviewed.								
TRANSIENT NONCOMMUNITY WATER SYSTEMS								
Not reviewed.								

28 - Sanitary Survey Violation, TCR
DV - violations assessed by the data verification team
M/R - Monitoring and/or Reporting Violation
ND - no discrepancy
NF - not found
SDWIS - violations listed in SDWIS
STATE RECORDS - violation assigned by the State

Exhibit 4
Consumer Confidence Report Discrepancy Report

PWSID	SYSTEM NAME	STATE RECORDS TYPE	STATE RECORDS DATE	VIOLATIONS SDWIS TYPE	VIOLATIONS SDWIS DATE	VIOLATIONS DV TYPE	VIOLATIONS DV DATE	COMMENTS
COMMUNITY WATER SYSTEMS								
No discrepancies were identified.								

7000-71 - Violation for failure to provide CCR to public or State
DV - violations assessed by the data verification team
ND - no discrepancy
NF - not found
SDWIS - violations listed in SDWIS
STATE RECORDS - violation assigned by the State

Exhibit 5
Total Coliform Rule Violation Discrepancy Report

PWSID	SYSTEM NAME	STATE RECORDS TYPE	STATE RECORDS DATE	VIOLATIONS SDWIS TYPE	VIOLATIONS SDWIS DATE	VIOLATIONS DV TYPE	VIOLATIONS DV DATE	COMMENTS	
COMMUNITY WATER SYSTEMS									
MI0002520	Gagetown, Village of	23	8/1/01	24	8/1/01	23	8/1/01	Office personnel mis-coded violation; should be "24" instead of "23." Discrepancy corrected while team was on-site.	1cd M/R G
NONTRANSIENT NONCOMMUNITY SYSTEMS									
Not reviewed.									
TRANSIENT NONCOMMUNITY WATER SYSTEMS									
Not reviewed.									

21 Acute TCR MCL Violation
22 Monthly TCR MCL Violation
23 M/R Routine Major
24 M/R Routine Minor
25 M/R Repeat Major
26 M/R Repeat Minor

 # cd M/R (or MCL) - a compliance determination discrepancy
 # df M/R (or MCL) - a data flow discrepancy
DV - violations assessed by the data verification team
*Q_ - Calendar quarter, 199_*

NF - not found
STATE RECORDS - violation assigned by the State
SDWIS - violations listed in SDWIS

Exhibit 6
Nitrate/Nitrite Violation Discrepancy Report

PWSID	SYSTEM NAME	STATE RECORDS		VIOLATIONS SDWIS		VIOLATIONS DV		COMMENTS
		TYPE	DATE	TYPE	DATE	TYPE	DATE	
COMMUNITY WATER SYSTEMS								
No discrepancies identified.								
NONTRANSIENT NONCOMMUNITY WATER SYSTEMS								
Not reviewed.								
TRANSIENT NONCOMMUNITY WATER SYSTEMS								
Not reviewed.								

1040 - Nitrate
1041 - Nitrite
03 - M/R violation
 # cd M/R (or MCL) - a compliance determination discrepancy
 # df M/R (or MCL) - a data flow discrepancy DV - violations assessed by the data verification team
*Q_ - Calendar quarter, 199_*
M/R - Monitoring and/or Reporting Violation
MCL - Maximum Contaminant Level Violation
NF - not found
POE - Point of Entry
STATE RECORDS - violation assigned by the State
SDWIS - violations listed in SDWIS

Exhibit 7
IOC Violation Discrepancy Report

PWSID	SYSTEM NAME	STATE RECORDS TYPE	STATE RECORDS DATE	VIOLATIONS SDWIS TYPE	VIOLATIONS SDWIS DATE	VIOLATIONS DV TYPE	VIOLATIONS DV DATE	COMMENTS
COMMUNITY WATER SYSTEMS								
No discrepancies were identified.								
NONTRANSIENT NONCOMMUNITY WATER SYSTEMS								
Not reviewed.								

03 - M/R Violation
 # cd M/R (or MCL) - a compliance determination discrepancy
 # df M/R (or MCL) - a data flow discrepancy
DV - violations assessed by the data verification team
*Q_ - Calendar quarter, 199_*
M/R - Monitoring and/or Reporting Violation
MCL - Maximum Contaminant Level Violation
NF - not found
POE - Point of Entry
STATE RECORDS - violation assigned by the State
SDWIS - violations listed in SDWIS

Exhibit 8
VOC Violation Discrepancy Report

PWSID	SYSTEM NAME	STATE RECORDS TYPE	STATE RECORDS DATE	VIOLATIONS SDWIS TYPE	VIOLATIONS SDWIS DATE	VIOLATIONS DV TYPE	VIOLATIONS DV DATE	COMMENTS
COMMUNITY WATER SYSTEMS								
No discrepancies were identified.								
NONTRANSIENT NONCOMMUNITY SYSTEMS								
Not reviewed.								

 # cd M/R (or MCL) - a compliance determination discrepancy
 # df M/R (or MCL) - a data flow discrepancy
*Q_ - Calendar quarter, 199_*

M/R - Monitoring and/or Reporting Violation
MCL - Maximum Contaminant Level Violation
NF - not found

POE - Point of Entry
STATE RECORDS - violation assigned by the State
SDWIS - violations listed in SDWIS

Exhibit 9
SOC Violation Discrepancy Report

PWSID	SYSTEM NAME	STATE RECORDS TYPE	STATE RECORDS DATE	VIOLATIONS SDWIS TYPE	VIOLATIONS SDWIS DATE	VIOLATIONS DV TYPE	VIOLATIONS DV DATE	COMMENTS
COMMUNITY WATER SYSTEMS								
No discrepancies were identified.								
NONTRANSIENT NONCOMMUNITY WATER SYSTEMS								
Not reviewed.								

 # cd M/R (or MCL) - a compliance determination discrepancy
 # df M/R (or MCL) - a data flow discrepancy

*Q_ - Calendar quarter, 199_*
M/R - Monitoring and/or Reporting Violation
MCL - Maximum Contaminant Level Violation
NF - not found

POE - Point of Entry
STATE RECORDS - violation assigned by the State
SDWIS - violations listed in SDWIS

Exhibit 10
Total Trihalomethanes Violation Discrepancy Report

PWSID	SYSTEM NAME	STATE RECORDS TYPE	STATE RECORDS DATE	VIOLATIONS SDWIS TYPE	VIOLATIONS SDWIS DATE	VIOLATIONS DV TYPE	VIOLATIONS DV DATE	COMMENTS
COMMUNITY WATER SYSTEMS								
No discrepancies were identified.								

 # cd M/R (or MCL) - a compliance determination discrepancy
 # df M/R (or MCL) - a data flow discrepancy
DV - violations assessed by the data verification team
*Q_ - Calendar quarter, 199_*
M/R - Monitoring and/or Reporting Violation
MCL - Maximum Contaminant Level Violation
NF - not found
POE - Point of Entry
STATE RECORDS - violation assigned by the State
SDWIS - violations listed in SDWIS

Exhibit 11
Radiological Violation Discrepancy Report

PWSID	SYSTEM NAME	STATE RECORDS TYPE	STATE RECORDS DATE	VIOLATIONS SDWIS TYPE	VIOLATIONS SDWIS DATE	VIOLATIONS DV TYPE	VIOLATIONS DV DATE	COMMENTS	
COMMUNITY WATER SYSTEMS									
MI0001690	Croswell, City of	NF	NF	NF	NF	4000-03	1/1/96	PWS had no radiological sampling previous to a result of 10/19/00.	1cd M/R A

4000 - Gross Alpha
03 - M/R Violation
 # cd M/R (or MCL) - a compliance determination discrepancy
 # df M/R (or MCL) - a data flow discrepancy
DV - violations assessed by the data verification team
*Q_ - Calendar quarter, 199_*
M/R - Monitoring and/or Reporting Violation
MCL - Maximum Contaminant Level Violation
NF - not found
POE - Point of Entry
STATE RECORDS - violation assigned by the State
SDWIS - violations listed in SDWIS

Exhibit 12
Lead and Copper Rule Violation Discrepancy Report

PWSID	SYSTEM NAME	REQUIREMENT	VIOLATION CODE	DISCREPANCY TYPE	COMMENTS
COMMUNITY WATER SYSTEMS					
MI0000290	Au Sable Township	Routine/Follow-up Monitoring	52	Submitted samples late or incorrectly	State was attempting to re-schedule PWSs from a split year to a calendar year schedule, so allowed some systems four years to complete triennial monitoring.
NONTRANSIENT NONCOMMUNITY WATER SYSTEMS					
Not reviewed.					

Exhibit 13
Surface Water Treatment Rule Violation Discrepancy Report

PWSID	SYSTEM NAME	STATE RECORDS TYPE	STATE RECORDS DATE	VIOLATIONS SDWIS TYPE	VIOLATIONS SDWIS DATE	VIOLATIONS DV TYPE	VIOLATIONS DV DATE	COMMENTS
COMMUNITY WATER SYSTEMS								
No discrepancies were identified.								
NONTRANSIENT NONCOMMUNITY WATER SYSTEMS								
Not reviewed.								
TRANSIENT NONCOMMUNITY WATER SYSTEMS								
Not reviewed.								

 # cd M/R (or MCL) - a compliance determination discrepancy
 # df M/R (or MCL) - a data flow discrepancy
DV - violations assessed by the data verification team
*Q_ - Calendar quarter, 199_*
M/R - Monitoring and/or Reporting Violation
MCL - Maximum Contaminant Level Violation
NF - not found
POE - Point of Entry
STATE RECORDS - violation assigned by the State
SDWIS - violations listed in SDWIS

Exhibit 14
Enforcement Violation Discrepancy Report

PWSID	SYSTEM NAME	STATE RECORDS TYPE	STATE RECORDS DATE	SDWIS TYPE	SDWIS DATE	DV TYPE	DV DATE	Related Violation and Date	COMMENTS
COMMUNITY WATER SYSTEMS									
No discrepancies were identified.									
NONTRANSIENT NONCOMMUNITY WATER SYSTEMS									
Not reviewed.									
TRANSIENT NONCOMMUNITY WATER SYSTEMS									
Not reviewed.									

 # cd M/R (or MCL) - a compliance determination discrepancy
 # df M/R (or MCL) - a data flow discrepancy
DV - Enforcement actions assessed by the D.V. team

*Q_ - Calendar quarter, 199_*
M/R - Monitoring and/or Reporting Violation
MCL - Maximum Contaminant Level Violation
NF - not found

STATE RECORDS - Enforcement actions issued by the State
SDWIS - Enforcement actions listed in SDWIS

Exhibit 15
Public Notification Discrepancy Report

PWSID	SYSTEM NAME	STATE RECORDS TYPE	STATE RECORDS DATE	SDWIS TYPE	SDWIS DATE	DV TYPE	DV DATE	Related Violation and Date	COMMENTS
COMMUNITY WATER SYSTEMS									
No discrepancies were identified.									
NONTRANSIENT NONCOMMUNITY WATER SYSTEMS									
Not reviewed.									
TRANSIENT NONCOMMUNITY WATER SYSTEMS									
Not reviewed.									

 # cd M/R (or MCL) - a compliance determination discrepancy
 # df M/R (or MCL) - a data flow discrepancy
DV - Enforcement actions assessed by the D.V. team
*Q_ - Calendar quarter, 199_*
M/R - Monitoring and/or Reporting Violation
MCL - Maximum Contaminant Level Violation
NF - not found
PN - Public Notice
SIE - State Public Notification Requested
STATE RECORDS - Enforcement actions issued by the State
SDWIS - Enforcement actions listed in SDWIS

Exhibit 1
Name, Address, Administrative Contact and PWSID Discrepancy Report

PWSID	SYSTEM NAME	ADDRESS	
		STATE RECORDS	SDWIS
COMMUNITY WATER SYSTEMS			
MI0063477	Sparrow Health Care - St Lawrence	AC=Denny Sawyer	AC=Administrator, Sparrow
NONTRANSIENT NONCOMMUNITY WATER SYSTEMS			
Not reviewed.			
TRANSIENT NONCOMMUNITY WATER SYSTEMS			
Not reviewed.			

Exhibit 2
Inventory Discrepancy Report

PWSID	SYSTEM NAME	POPULATION		SERVICE CONNECTIONS		OWNER TYPE		TYPE OF SYSTEM		STATUS OF SYSTEM		SOURCE	
		STATE	SDWIS	STATE	SDWIS	STATE	SDWIS	STATE	SDWIS	STATE	SDWIS	STATE	SDWIS
COMMUNITY WATER SYSTEMS*													
MI0005332	Pine Cove Apartments	35 (SS)	40										
MI0063477	Sparrow Health Care - St Lawrence			2	1								
MI0003946	Looking Glass Terraces Apts.	31(SS)	70	25(SS)	12								
MI0005039	Orchard Place Manor Apartments	100	60										
NONTRANSIENT NONCOMMUNITY WATER SYSTEMS													
Not reviewed.													
TRANSIENT NONCOMMUNITY WATER SYSTEMS													
Not reviewed.													

CAC - Community Active Current
GU - Ground water Under the influence of Surface Water
GW - Groundwater source
GWP - purchased groundwater
ND - no discrepancy
NF - not found
STATE RECORDS - violation assigned by the State
SDWIS - violations listed in SDWIS
SS - Sanitary Survey
SW - Surface water source
SWP - Purchased surface water
TNC - Transient Noncommunity
NTNC - Nontransient Noncommunity

* The team would like to note that all inventory discrepancies identified above were corrected by the State while the team was on-site.

Exhibit 3
Sanitary Survey Discrepancy Report

PWSID	SYSTEM NAME	STATE RECORDS TYPE	STATE RECORDS DATE	VIOLATIONS SDWIS TYPE	VIOLATIONS SDWIS DATE	VIOLATIONS DV TYPE	VIOLATIONS DV DATE	COMMENTS
COMMUNITY WATER SYSTEMS								
MI0002785	Grand Pointe Subdivision	NF	NF	NF	NF	28	1/1/95	Only sanitary survey in files dated 9/29/99; PWS should have had a previous sanitary survey, at least by June of 1995.
NONTRANSIENT NONCOMMUNITY WATER SYSTEMS								
Not reviewed.								
TRANSIENT NONCOMMUNITY WATER SYSTEMS								
Not reviewed.								

28 - Sanitary Survey Violation, TCR
DV - violations assessed by the data verification team
M/R - Monitoring and/or Reporting Violation
ND - no discrepancy
NF - not found
SDWIS - violations listed in SDWIS
STATE RECORDS - violation assigned by the State

Exhibit 4
Consumer Confidence Report Discrepancy Report

PWSID	SYSTEM NAME	STATE RECORDS TYPE	STATE RECORDS DATE	VIOLATIONS SDWIS TYPE	VIOLATIONS SDWIS DATE	VIOLATIONS DV TYPE	VIOLATIONS DV DATE	COMMENTS
COMMUNITY WATER SYSTEMS								
No discrepancies were identified.								

7000-71 - Violation for failure to provide CCR to public or State
DV - violations assessed by the data verification team

ND - no discrepancy
NF - not found

SDWIS - violations listed in SDWIS
STATE RECORDS - violation assigned by the State

Exhibit 5
Total Coliform Rule Violation Discrepancy Report

PWSID	SYSTEM NAME	STATE RECORDS TYPE	STATE RECORDS DATE	VIOLATIONS SDWIS TYPE	VIOLATIONS SDWIS DATE	VIOLATIONS DV TYPE	VIOLATIONS DV DATE	COMMENTS
COMMUNITY WATER SYSTEMS								
No discrepancies were identified.								
NONTRANSIENT NONCOMMUNITY SYSTEMS								
Not reviewed.								
TRANSIENT NONCOMMUNITY WATER SYSTEMS								
Not reviewed.								

21 Acute TCR MCL Violation
22 Monthly TCR MCL Violation
23 M/R Routine Major
24 M/R Routine Minor
25 M/R Repeat Major
26 M/R Repeat Minor

 # cd M/R (or MCL) - a compliance determination discrepancy
 # df M/R (or MCL) - a data flow discrepancy
DV - violations assessed by the data verification team
*Q_ - Calendar quarter, 199_*

NF - not found
STATE RECORDS - violation assigned by the State
SDWIS - violations listed in SDWIS

Exhibit 6
Nitrate/Nitrite Violation Discrepancy Report

PWSID	SYSTEM NAME	STATE RECORDS TYPE	STATE RECORDS DATE	VIOLATIONS SDWIS TYPE	VIOLATIONS SDWIS DATE	VIOLATIONS DV TYPE	VIOLATIONS DV DATE	COMMENTS	
COMMUNITY WATER SYSTEMS									
MI0063477	Sparrow Health Care - St Lawrence	1040-03	1/1/00	NF	NF	1040 03	1/1/00	Violation in State database and confirmed by DV team, but not transferred to SDWIS/Fed. System was under DCIS during this time and transferred to DEQ in January 2002.	1df MR E
NONTRANSIENT NONCOMMUNITY WATER SYSTEMS									
Not reviewed.									
TRANSIENT NONCOMMUNITY WATER SYSTEMS									
Not reviewed.									

1040 - Nitrate
1041 - Nitrite
03 - M/R violation
 # cd M/R (or MCL) - a compliance determination discrepancy

 # df M/R (or MCL) - a data flow discrepancy DV - violations assessed by the data verification team
*Q_ - Calendar quarter, 199_*
M/R - Monitoring and/or Reporting Violation
MCL - Maximum Contaminant Level Violation

NF - not found
POE - Point of Entry
STATE RECORDS - violation assigned by the State
SDWIS - violations listed in SDWIS

Exhibit 7
IOC Violation Discrepancy Report

PWSID	SYSTEM NAME	STATE RECORDS TYPE	STATE RECORDS DATE	VIOLATIONS SDWIS TYPE	VIOLATIONS SDWIS DATE	VIOLATIONS DV TYPE	VIOLATIONS DV DATE	COMMENTS
COMMUNITY WATER SYSTEMS								
No discrepancies were identified.								
NONTRANSIENT NONCOMMUNITY WATER SYSTEMS								
Not reviewed.								

03 - M/R Violation
 # cd M/R (or MCL) - a compliance determination discrepancy
 # df M/R (or MCL) - a data flow discrepancy
DV - violations assessed by the data verification team
*Q_ - Calendar quarter, 199_*
M/R - Monitoring and/or Reporting Violation
MCL - Maximum Contaminant Level Violation
NF - not found
POE - Point of Entry
STATE RECORDS - violation assigned by the State
SDWIS - violations listed in SDWIS

Exhibit 8
VOC Violation Discrepancy Report

PWSID	SYSTEM NAME	STATE RECORDS TYPE	STATE RECORDS DATE	VIOLATIONS SDWIS TYPE	VIOLATIONS SDWIS DATE	VIOLATIONS DV TYPE	VIOLATIONS DV DATE	COMMENTS
COMMUNITY WATER SYSTEMS								
No discrepancies were identified.								
NONTRANSIENT NONCOMMUNITY SYSTEMS								
Not reviewed.								

 # cd M/R (or MCL) - a compliance determination discrepancy
 # df M/R (or MCL) - a data flow discrepancy
*Q_ - Calendar quarter, 199_*

M/R - Monitoring and/or Reporting Violation
MCL - Maximum Contaminant Level Violation
NF - not found

POE - Point of Entry
STATE RECORDS - violation assigned by the State
SDWIS - violations listed in SDWIS

Exhibit 9
SOC Violation Discrepancy Report

PWSID	SYSTEM NAME	STATE RECORDS TYPE	STATE RECORDS DATE	VIOLATIONS SDWIS TYPE	VIOLATIONS SDWIS DATE	VIOLATIONS DV TYPE	VIOLATIONS DV DATE	COMMENTS
COMMUNITY WATER SYSTEMS								
No discrepancies were identified.								
NONTRANSIENT NONCOMMUNITY WATER SYSTEMS								
Not reviewed.								

 # cd M/R (or MCL) - a compliance determination discrepancy
 # df M/R (or MCL) - a data flow discrepancy

*Q_ - Calendar quarter, 199_*
M/R - Monitoring and/or Reporting Violation
MCL - Maximum Contaminant Level Violation
NF - not found

POE - Point of Entry
STATE RECORDS - violation assigned by the State
SDWIS - violations listed in SDWIS

Exhibit 10
Total Trihalomethanes Violation Discrepancy Report

PWSID	SYSTEM NAME	STATE RECORDS TYPE	STATE RECORDS DATE	VIOLATIONS SDWIS TYPE	VIOLATIONS SDWIS DATE	VIOLATIONS DV TYPE	VIOLATIONS DV DATE	COMMENTS
COMMUNITY WATER SYSTEMS								
No discrepancies were identified.								

 # cd M/R (or MCL) - a compliance determination discrepancy
 # df M/R (or MCL) - a data flow discrepancy
DV - violations assessed by the data verification team
*Q_ - Calendar quarter, 199_*
M/R - Monitoring and/or Reporting Violation
MCL - Maximum Contaminant Level Violation
NF - not found
POE - Point of Entry
STATE RECORDS - violation assigned by the State
SDWIS - violations listed in SDWIS

Exhibit 11
Radiological Violation Discrepancy Report

PWSID	SYSTEM NAME	STATE RECORDS TYPE	STATE RECORDS DATE	VIOLATIONS SDWIS TYPE	VIOLATIONS SDWIS DATE	VIOLATIONS DV TYPE	VIOLATIONS DV DATE	COMMENTS
COMMUNITY WATER SYSTEMS								
No discrepancies identified.								

03 - M/R Violation
 # cd M/R (or MCL) - a compliance determination discrepancy
 # df M/R (or MCL) - a data flow discrepancy
DV - violations assessed by the data verification team
*Q_ - Calendar quarter, 199_*
M/R - Monitoring and/or Reporting Violation
MCL - Maximum Contaminant Level Violation
NF - not found
POE - Point of Entry
STATE RECORDS - violation assigned by the State
SDWIS - violations listed in SDWIS

Exhibit 12
Lead and Copper Rule Violation Discrepancy Report

PWSID	SYSTEM NAME	REQUIREMENT	VIOLATION CODE	DISCREPANCY TYPE	COMMENTS
COMMUNITY WATER SYSTEMS					
MI0001900	Durand, City of	Routine/Follow-up Monitoring	52	Have incorrect or missing violation in SDWIS	Violation in SDWIS/State, but was not found in SDWIS/Fed. State believes that error in monitoring periods submitted for the violation (an end date of 9/30/01 rather than 12/31/01) caused SDWIS/Fed to reject the violation. End date has been corrected and will be sent to SDWIS/Fed during the next upload.
MI0005039	Orchard Place Manor Apartments	Initial Monitoring	51	Never completed two, consecutive six-month rounds of sampling	PWS began sampling in first half of 2000 (3/27/00), missed second initial round due in July-December 2000.
		Steps required after ALE	n/a	Did not report ALE to SDWIS	Copper ALE (3.9 ppm) of 6/26/01 not reported to SDWIS/Fed.
		Steps required after ALE	53	Collected water quality parameters late or incorrectly	Water quality parameters for Copper ALE of 6/26/01 due 6/30/01; not taken until 12/01. No violation reported to SDWIS/Fed. State did not require OCCT recommendation from PWS; system opted to keep sampling to determine if CU levels would decline.
NONTRANSIENT NONCOMMUNITY WATER SYSTEMS					
Not reviewed.					

M/R - Monitoring and/or Reporting Violation
NF - not found
POE - Point of Entry
State RECORDS - violation assigned by the State
SDWIS - violations listed in SDWIS

Exhibit 13
Surface Water Treatment Rule Violation Discrepancy Report

PWSID	SYSTEM NAME	STATE RECORDS TYPE	STATE RECORDS DATE	VIOLATIONS SDWIS TYPE	VIOLATIONS SDWIS DATE	VIOLATIONS DV TYPE	VIOLATIONS DV DATE	COMMENTS
COMMUNITY WATER SYSTEMS								
No discrepancies were identified.								
NONTRANSIENT NONCOMMUNITY WATER SYSTEMS								
Not reviewed.								
TRANSIENT NONCOMMUNITY WATER SYSTEMS								
Not reviewed.								

 # cd M/R (or MCL) - a compliance determination discrepancy
 # df M/R (or MCL) - a data flow discrepancy
DV - violations assessed by the data verification team
*Q_ - Calendar quarter, 199_*
M/R - Monitoring and/or Reporting Violation
MCL - Maximum Contaminant Level Violation
NF - not found
POE - Point of Entry
STATE RECORDS - violation assigned by the State
SDWIS - violations listed in SDWIS

Exhibit 14
Enforcement Violation Discrepancy Report

PWSID	SYSTEM NAME	STATE RECORDS TYPE	STATE RECORDS DATE	SDWIS TYPE	SDWIS DATE	DV TYPE	DV DATE	Related Violation and Date	COMMENTS
COMMUNITY WATER SYSTEMS									
No discrepancies were identified.									
NONTRANSIENT NONCOMMUNITY WATER SYSTEMS									
Not reviewed.									
TRANSIENT NONCOMMUNITY WATER SYSTEMS									
Not reviewed.									

 # cd M/R (or MCL) - a compliance determination discrepancy
 # df M/R (or MCL) - a data flow discrepancy
DV - Enforcement actions assessed by the D.V. team

*Q_ - Calendar quarter, 199_*
M/R - Monitoring and/or Reporting Violation
MCL - Maximum Contaminant Level Violation
NF - not found

STATE RECORDS - Enforcement actions issued by the State
SDWIS - Enforcement actions listed in SDWIS

Exhibit 15
Public Notification Discrepancy Report

PWSID	SYSTEM NAME	STATE RECORDS TYPE	STATE RECORDS DATE	SDWIS TYPE	SDWIS DATE	DV TYPE	DV DATE	Related Violation and Date	COMMENTS
COMMUNITY WATER SYSTEMS									
No discrepancies were identified.									
NONTRANSIENT NONCOMMUNITY WATER SYSTEMS									
Not reviewed.									
TRANSIENT NONCOMMUNITY WATER SYSTEMS									
Not reviewed.									

 # cd M/R (or MCL) - a compliance determination discrepancy
 # df M/R (or MCL) - a data flow discrepancy

DV - Enforcement actions assessed by the D.V. team
*Q_ - Calendar quarter, 199_*
M/R - Monitoring and/or Reporting Violation
MCL - Maximum Contaminant Level Violation
NF - not found

PN - Public Notice
SIE - State Public Notification Requested
STATE RECORDS - Enforcement actions issued by the State
SDWIS - Enforcement actions listed in SDWIS

Appendix C

Phase II/V Waiver Information

Appendix C

Phase II/V Waiver Information

MICHIGAN DEPARTMENT OF PUBLIC HEALTH

DIVISION OF WATER SUPPLY

MONITORING WAIVER PROGRAM

STATE OF MICHIGAN

JOHN ENGLER, Governor

DEPARTMENT OF PUBLIC HEALTH

3423 N. LOGAN / MARTIN L. KING JR. BLVD.
P.O. BOX 30195, LANSING, MICHIGAN 48909

VERNICE DAVIS ANTHONY, MPH, Director

June 16, 1993

Mr. John Dalessandro
U.S. Environmental Protection Agency
Region 5
77 West Jackson Boulevard
Chicago, Illinois 60604

Subject: Michigan's Phase II/V Waiver Program

Dear Mr. Dalessandro:

In your June 9, 1993 letter, you requested a revised final waiver program for the phase II/V contaminants prior to your final approval of the program. Enclosed is a copy of the correspondence concerning the Michigan program along with the original proposal and revisions as requested. The vulnerability assessment form has been revised and the updated version has been included in this submittal.

We have expanded the flow chart to cover second and third round monitoring. Although Dalapon is in the "limited scans" monitoring, the detection limit is not low enough to meet the Federal Register criteria. Therefore, we will develop a special statewide monitoring assessment for it similar to diquat, endothall, and glyphosate.

We hope this information is adequate for you to proceed with final approval of our program.

Very truly yours,

James K. Cleland

James K. Cleland, P.E., Chief
Division of Water Supply
Bureau of Environmental
and Occupational Health

JKC:ae
Enclosure

BASIC PROGRAM

MICHIGAN DEPARTMENT OF PUBLIC HEALTH

MEMORANDUM

DATE: May 8, 1992

TO: Water Supply Staff and U. P. (All Technical)

FROM: Elgar Brown EWB

SUBJECT: Waiver Policy for Phase II & V Organic Chemical Contaminants

EPA has commented on our waiver policy and a few changes have been incorporated. We have also met with Department of Agriculture officials to discuss this policy. The plan is shown on the attached flow chart and explanations are provided with the chart. Guidance on developing the procedures for granting waivers will be further developed as additional information becomes available, but initially it is as follows:

I. Total Waivers - A total waiver from all of the monitoring requirements for the phase II and V contaminants, except distribution concerns such as asbestos and coal tar linings, may be granted under certain conditions. This may be done through either an area wide waiver or a system specific susceptibility waiver. Criteria for these are listed in Chart A.

II. Limited Scan Waivers - These waivers will be granted to systems where there is information available concerning the well construction and the well meets construction standards. These systems would very likely not be impacted by pesticides and herbicides, but there may have been some use in the area. Criteria for these are listed in Chart B.

III. No waivers - Some systems will be required to do a full scan monitoring (except dioxin, asbestos) for the full four quarters. These may be the surface water intakes, very shallow wells in farming areas, wells in karst bed rock and wells under the direct influence of surface water.

IV. Systems will be required to do the XPA scan monitoring if they have mains with coal tar linings. This scan would detect benzo(a)pyrene * which is the most common PAH. These systems must also assess the monitoring requirements of their source.

V. The state will do limited monitoring for asbestos and dioxin at the most vulnerable sites and probably waive the remaining supplies in the state based on area waivers. The state will also do some limited monitoring for EDB, DBCP, glyphosate, endothall, and diquat. *

The phase II and V organic (regulated and unregulated) contaminants that are not analyzed in the limited scans (XAH, XLP, XNP, XPI) are: ← EPA Methods 525.1, 531.1, 515.1)

- dibromochloropropane (DBCP)
- ethylene dibromide (EDB)
- di(ethlyhexyl)adipate *
- di(ethylhexyl)phthalate *
- diquat
- endothall
- glyphosate
- ~~PAH's~~
- dioxin
- asbestos
- ~~dalapon~~

The compounds that are included in these scans are listed on the attached sheets.

According to Dave Wade, from the Michigan Department of Agriculture, the dibromochloropropane and ethylene dibromide have been banned for several years. These are fumigants and as such were not typically applied directly to the soil.

Di(ethylhexyl)adipate is used as a plasticizer in the development of products such as synthetic rubber, food packaging materials and cosmetics. It biodegrades readily and has a high affinity for soil particles. Due to this, it is not expected to migrate to the water table. Based on this, the contaminant could be waived in most cases.

Di(ethlyhexyl)phthalate is the most common of a family of phthalates that are common in the environment. They are used as plasticizers in PVC resins. This can be detected in the XPA scan and some state wide monitoring will be done for this.

Diquat, endothall, and glyphosate are common in the environment, but they biodegrade rapidly and are not persistent. Vulnerable supplies may be required to monitor for these compounds.

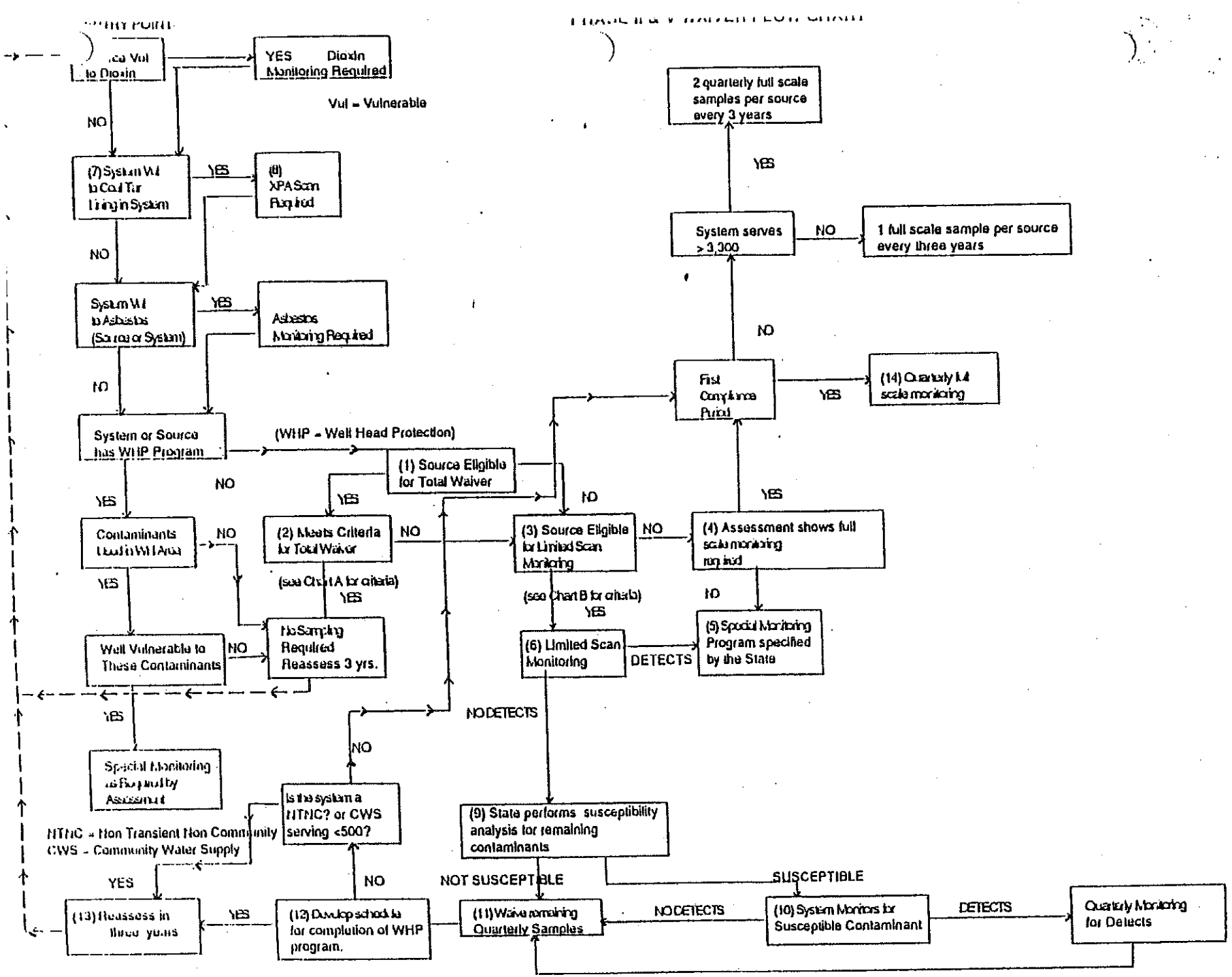
A special state supported monitoring program will be developed for some of the contaminants that are not included in the limited scan monitoring, but are in common use in the state such as diquat, endothall, and glyphosate. This program will also include at some sites all of the remaining contaminants. These sites will be selected on a vulnerability basis.

The ultimate goal of this waiver process is to have public water supplies develop well head protection programs for better management of their ground water resources. Many systems will not have time to develop a program prior to the monitoring requirements of the phase II and V rules. The limited scan monitoring waiver will reduce the cost impact of these rules while a system develops a well head protection program.

WEB:ae

Attachments

cc: Dr. Williams


Vul = Vulnerable
YES Dioxin Monitoring Required
NO
(7) System Vul to Coal Tar Lining in System
YES
(8) XPA Scan Required
NO
System Vul to Asbestos (Source or System)
YES
Asbestos Monitoring Required
NO
System or Source has WHP Program
(WHP = Well Head Protection)
YES
NO
(1) Source Eligible for Total Waiver
YES
NO
Contaminants Used in WH Area
NO
(2) Meets Criteria for Total Waiver
NO
(3) Source Eligible for Limited Scan Monitoring
NO
(4) Assessment shows full scale monitoring required
YES
(see Chart A for criteria)
YES
(see Chart B for criteria)
YES
NO
Well Vulnerable to These Contaminants
NO
No Sampling Required Reassess 3 yrs.
(6) Limited Scan Monitoring
DETECTS
(5) Special Monitoring Program specified by the State
YES
Special Monitoring as Required by Assessment
NO DETECTS
NO
Is the system a NTNC? or CWS serving <500?
NTNC = Non Transient Non Community
CWS = Community Water Supply
(9) State performs susceptibility analysis for remaining contaminants
YES
NO
NOT SUSCEPTIBLE
SUSCEPTIBLE
(13) Reassess in three years
YES
(12) Develop schedule for completion of WHP program.
(11) Waive remaining Quarterly Samples
NO DETECTS
(10) System Monitors for Susceptible Contaminant
DETECTS
Quarterly Monitoring for Detects
2 quarterly full scale samples per source every 3 years
YES
System serves > 3,300
NO
1 full scale sample per source every three years
NO
First Compliance Period
YES
(14) Quarterly full scale monitoring

WAIVER FLOW CHART DESCRIPTIONS

1. A combination of use and susceptibility must be used to determine if a system qualifies for a total waiver from all monitoring requirements for SOC's in the phase II and V rules.

2. The criteria for a total system waiver may include no use in the total region or no use in the vicinity of the well. See Chart A for criteria.

3. A source may be eligible for limited scan monitoring if the source is properly constructed but there is limited pesticide use in the area. See Chart B for criteria.

4. If a source is not eligible for limited scan monitoring, an additional scan may be required or the full scale monitoring may be dictated.

5. If additional monitoring is required, but not the full scale monitoring, a special monitoring program must be developed.

6. The limited scan monitoring consists of the XAH, XLP, XNP, and XPI scans. The scans will monitor for all of the SOC's in phase II and V except for dibromochloropropane (DBCP), ethylene dibromide (EDB), di(ethylhexyl)adipate, di(ethylhexyl)phalates, diquat, endothall, glyphosate, benzo(a)pyrene (PAH), dioxin and asbestos. To be eligible for waiving the quarterly monitoring, the limited scan sample must be collected during a period of highest exposure. If four quarterly samples were collected, the maximum time between samples could be six months. Therefore, the limited scan sample must be collected during the most vulnerable six month period, which would be from the first of April to the end of September.

   The limited scan monitoring will provide analyses for over 75 contaminants.

7.&8. If coal tar linings are common in the system from tank coatings or main coatings, the XPA scan would be required. This would pick up the phalates and benzo(a)pyrene (PAH).

9. The state will perform a state assessment for the remaining contaminants that are not in the limited scan monitoring. This will include discussions with the Department of Agriculture concerning the nature of the contaminants and their use. The division will then set up a program to do limited monitoring at the most susceptible sites for contaminants that may be common.

10. If there are detects in the state assessment for these remaining contaminants, some systems may be required to do some additional monitoring for ones they are susceptible to.

11. If there are no detects in the limited scan monitoring and the state assessment does not require additional monitoring, the remaining quarterly samples will be waived and the monitoring requirements are satisfied for the three year compliance period.

12. A schedule for a wellhead protection program must be developed to be eligible for repeat limited scan monitoring. If an acceptable schedule is not developed, the system reverts to full scale monitoring.

13. The status of the systems must be reassessed in three years. Basically, go through the waiver process again.

14. Quarterly full scale monitoring, except dioxin, asbestos, and the polynuclear aromatic hydrocarbons (PAH's), is required for these systems. (EDB and DBCP may be included in this monitoring depending on the results of a preliminary monitoring by the state).

CHART A

Criteria Considerations for Total Waivers Phase II and V Monitoring

1. None of the contaminants are used within a certain region or area.
2. None of the contaminants are used within an arbitrary distance of the well.
3. The well is properly constructed and is in a deep confined aquifer.
4. The well is properly constructed and is in a deep unconfined aquifer. The area would have to be free of potential contaminants for this to apply for a total waiver.

Items that may eliminate a system from a total waiver.

1. Previous positive organics.
2. Surface water source.
3. High nitrates.
4. Karst formation.
5. Improper well construction and isolation.
6. Proximity to high risk sources such as superfund sites and 307 sites.
7. Proximity to chemical manufacturing sites, bulk chemical storage.
8. Shallow unconfined aquifer.
9. Proximity to pesticide mixing sites.
10. Ground water wells under the direct influence of surface water.
11. Previous susceptibility studies indicating vulnerability.

CHART B
(Criteria for Limited Scan Monitoring)

1. Some surface water intakes if there are background data or the intake is not directly influenced by runoff.

2. Properly constructed wells of reasonable depth in an unconfined aquifer.

3. Wells in areas of limited pesticide use.

Items that may require sources to perform monitoring in addition to limited scan monitoring.

1. Intakes on inland streams and rivers.

2. Some previous positive organics. System may be allowed to do limited scan plus monitoring for the previous positive contaminants.

3. Improperly constructed wells.*

4. Wells in Karst areas, unless very deep.

5. High nitrate sources.

6. Proximity to high risk contaminant sources such as superfund and 307 sites.

7. Proximity to bulk storage or manufacture of pesticides or herbicides.

8. Wells under the direct influence of surface water in areas with high pesticide use.

*Wells constructed according to standards would be considered as properly constructed, even if construction standards have changed.

CORRESPONDENCE

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

REPLY TO THE ATTENTION OF:

MAR 27 1992

WD-17J

James K. Cleland, P.E., Chief
Division of Water Supply
Michigan Department of Public Health
3423 North Logan/Martin L. King Jr., Blvd.
P.O. Box 30195
Lansing, Michigan 48909

Dear Mr. Cleland:

My staff have reviewed Michigan's January 13, 1992 Waiver Policy for Phase II and V. Generally, this proposal follows the regulatory intent more closely than did the original proposal submitted in September of 1991. The following comments on the latest proposal are changes needed to make the document approvable.

The scans used by the State (XAH, XLP, XNP, and XPI) must have a method detection limit equal to the methods identified in the Federal Regulations.

On page two of the proposed Waiver Policy, item IV describes those systems that must do the XPA scan monitoring. This group of wells also must be required to do a full or partial scan.

On page two, item V discusses the State undertaking limited monitoring for asbestos and dioxin at the "most vulnerable" sites. The State must identify how the "most vulnerable" sites are determined. In addition, the State's method for determining vulnerability must be described.

On page two, the basis for issuing a waiver for pentachlorophenol (was not detected in the National Pesticide Survey) is insufficient. Pentachlorophenol may have limited use, but as a wood preservative, has a widespread distribution. Additional criteria for issuing a waiver for this contaminant must be defined.

The first paragraph of page three states that vulnerable supplies may be required to monitor for diquat, endothall, and glyphosate. Systems with pesticide detections must be required to monitor for these pesticides, unless specific "use" waivers have been granted.

Phase II and V Waiver Flow chart

The flow chart refers to "special monitoring as required by assessment." You must define "special monitoring."

The pesticide monitoring requirements in the flow chart are inaccurate. Pesticide monitoring requires two quarterly samples for systems serving greater than 3,300 people. This inaccuracy in the flow chart must be corrected.

Chart A

Criteria Considerations for Total Waivers

The proposed Waiver Policy should consider the draft Regional guidance by establishing a monitoring waiver review area that factors in the State's developing wellhead protection area delineation criteria and methods.

The terms "certain region" and "arbitrary distance" must be defined. The definitions should comply with the draft Regional Monitoring Waiver guidance.

Item 3 refers to a "deep protected aquifer;" this should be described as a deep confined aquifer.

Item 4 describes "a deep aquifer that has no aquitard above it." The terminology should reflect the acceptable term "unconfined aquifer" in describing this hydrogeological situation.

Although the Federal Regulations do not disallow the issuance of waivers for all the contaminants regulated under the Phase II and Phase V Regulations, Region 5 believes the number of systems qualifying for a "total waiver" would be relatively small.

The State should include a statement from the State Agricultural Department certifying the non-use of certain pesticides and describing the Department's enforcement program, if a State-wide "use" waiver is issued for any pesticide regulated under the Phase II or Phase V Regulations.

Items that may eliminate a system from a total waiver.

This list should include: Proximity to pesticide mixing sites, ground water wells under the direct influence of surface water, and previous susceptibility studies indicating the system is susceptible to contamination.

According to the draft Regional Monitoring Waiver guidance, a surface water system is not eligible for waivers without an initial round of sampling.

Item 8 refers to a "High water table aquifer," this should be modified to a "Shallow unconfined aquifer."

Chart B

Criteria for Limited Scan Monitoring

The term "water table" should be correctly identified as "unconfined."

Those systems located in areas with limited pesticide use should be included in the criteria for limited scan monitoring.

The term "reasonable depth" in item 2 must be defined.

Items that may eliminate a system from limited scan monitoring.

"Karst formations" should be identified as "karst areas."

The criteria for a "very deep" well must be defined.

In item 5, "Most high nitrate sources" must be changed to "High nitrate sources."

Item 6 should be modified to read "Proximity to high risk contaminant sources."

This list should include: ground water wells under the direct influence of surface water in those areas with pesticide use.

The Ground Water Protection Branch compliments the proposed Waiver Policy that has wellhead protection factored in as the ultimate goal of the waiver process.

With some modifications, this proposal for a monitoring waiver program should be acceptable for use in the Phase II and Phase V Regulations. Please keep us informed on the progress of development of Michigan's monitoring waiver program. If you have questions or need additional information, please contact Thomas Matheson, of my staff, at (312) 886-6204.

Sincerely yours,

Edward P. Watters

Edward P. Watters, Chief
Safe Drinking Water Branch

STATE OF MICHIGAN

JOHN ENGLER, GOVERNOR

DEPARTMENT OF PUBLIC HEALTH

3423 N. LOGAN/MARTIN L. KING JR., BLVD.
P.O. BOX 30195, LANSING, MICHIGAN 48909

Vernice Davis Anthony, Director

May 13, 1992

Mr. Edward P. Watters, Chief
Safe Drinking Water Branch
United States Environmental Protection Agency
Region 5 (WD-17J)
77 West Jackson Boulevard
Chicago, Illinois 60604

Dear Mr. Watters:

In your letter of March 27, 1992, you addressed several comments concerning the proposed waiver policy that the Michigan Department of Public Health is developing for implementing Phase II and V regulations. The policy can be altered or explained to address these comments. These comments will be addressed as listed in your letter. A revised copy along with your comment letter is enclosed.

Previous policy for determining Method Detection Limits (MDL's) by the Water Analysis Section of the MDPH Laboratory has stressed assurance that detection is valid and that the identity of compounds detected may be clearly confirmed. Newly established MCL's appear to be set at about the same levels dictated by previous MDPH lab policy. The laboratory has reduced MDL values in cases of relatively low MCLs, and will be reporting detection of some compounds below levels allowing confident MS confirmation. Reporting MDL's will be at or below 50% of MCL's for all regulated compounds. All of the experienced analysts in the water lab believe the MDL's cited in EPA methods are artificially low in many cases for use in reporting of unknown samples and cannot be ethically used for reporting field samples even though techniques used are equivalent to those cited in EPA methodology. Also, the MDPH lab will <u>not</u> composite samples. Allowing up to a five sample composite as written, the Phase II rule effectively increases any laboratory MDL by a factor of five. The Michigan approach of meeting at least 50% of the MCL and not allowing composites will provide effective detection.

The public water supplies that must do distribution system monitoring for the XPA scan will also address the monitoring requirements of their sources. A clarification sentence has been added.

Asbestos monitoring will be done on selected systems with corrosive water that have asbestos cement pipe. We estimate analyzing 25 asbestos samples initially and additional ones if needed. The dioxin monitoring will be done in areas near paper mills and in areas near the Midland Dow Chemical plant at vulnerable sources. Again, there will probably be 25 samples initially.

Pentachlorophenol has been added to the limited scan monitoring.

Any system with a pesticide detect will be required to monitor for diquat, endothall, and glyphosate.

The special monitoring as required by assessment would be monitoring for the contaminant that is used in the wellhead area. The monitoring frequency would depend on the time of travel, the location within the wellhead area, the degree of threat, and other factors that would be site specific.

The reference to quarterly sampling for systems greater than 3300 has been corrected.

Chart A

As systems develop wellhead protection areas, the waiver decisions will be concentrated in these areas.

The terms "certain region" and "arbitrary distance" are intentionally vague. These must be site specific determinations. We do not anticipate very many total waivers since we plan to have most systems do limited scan monitoring. The total waivers will be on a case-by-case basis. We will review these decisions with Region V EPA during our mid-year evaluation.

"Deep protected aquifer" has been changed to "deep confined aquifer".

The terminology has been changed to "unconfined aquifer".

We agree with Region V on the number of systems qualifying for a total waiver. The number of systems qualifying for a total waiver would be very small.

The state will work with the Michigan Department of Agriculture to develop a use statement for any contaminants that would qualify for a use waiver. Possible candidates would be dioxin, EDB, DBCP, and di(ethylhexyl)adipate.

Items that may Eliminate a System from a Total Waiver

We have added the items from your letter to the list of items that may eliminate a system from a total waiver.

We do not plan to totally waive any surface water source from monitoring, but we do plan to use the limited scan monitoring on many of the Great Lakes sources.

Item eight has been modified to reflect your comment.

Chart B

Criteria for Limited Scan Monitoring

The first item has been addressed as suggested.

We have added "Wells in areas of limited pesticide use." although you did not specify what limited meant. We will use logic to make this determination.

Reasonable depth could be site specific although a minimum would be at least 25 feet since a casing depth of 25 feet is required on all wells.

Items that may Eliminate a System from Limited Scan Monitoring

"Karst formations" has been changed to "Karst areas".

"Very deep" again is a site specific determination, but will probably relate to wells over 100 feet. This determination on vulnerability will depend on the area, the degree of fracturing, and potential for contamination.

"Most" has been deleted from the nitrate sources.

The word contaminant has been included in item 6.

We have included "Wells under the direct influence of surface water in areas with high pesticide use".

We hope these changes answer your concerns with the Michigan waiver policy for the Phase II and V contaminant monitoring. We will implement this policy for the public water supplies in Michigan. If you have additional comments, please contact us.

Very truly yours,

James K. Cleland, P.E., Chief
Division of Water Supply
Bureau of Environmental
and Occupational Health

JKC:WBE

Enclosures

cc: Dr. Ted Williams

WCD —
Can we make the "rule of thumb"?

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

REPLY TO THE ATTENTION OF:
WD-17J

OCT 23 1992

James K. Cleland, P.E., Chief
Division of Water Supply
Michigan Department of Public Health
3423 North Logan/Martin L. King Jr., Blvd.
P.O. Box 30195
Lansing, Michigan 48909

Dear Mr. Cleland:

This is in response to your August 14, 1992 letter requesting approval of Michigan Department of Public Health's (MDPH) revised monitoring waiver program. Prior to granting this approval, the following items must be acknowledged:

1. The MDPH proposes to use method detection limits (MDL) that are greater than those listed in the Federal Register for Phase II and Phase V contaminant screens. Michigan's contention is that the use of a MDL of no greater than one-half the maximum contaminant level (MCL) would be more stringent (i.e., sensitive) than the listed MDL, when composited samples are analyzed.

   Your suggestion is apparently partially supported by 40 CFR. §141(h)(10) of the Phase V portion of the regulations which allows up to five samples to be composited, "...provided that the detection limit of the method used for the analysis is less than one-fifth of the MCL." However, standard analytical practice recommends that MDLs should be no greater than one-third (one-half log unit) of the appropriate value for the analyte and matrix of concern. An MDL of one-fifth to one-tenth the appropriate value is desirable and sufficient in most cases to evaluate whether the concentration of the analyte is approaching the value critical to the decision making process. Using this rule-of-thumb, not only must the MDL for dinoseb be lowered but also those for benzo(a)pyrene, pentachlorophenol, and diethylhexylphthalate. Additional compounds where the value of five time the MDL is greater than 1/3 of the MCL are: endrin, hexachlorobenzene, PAHs, phthalates, and dioxin.

   As noted on the attached table, five contaminants cannot be composited because the MDL exceeds the 1/5 MCL criterion. Since these four contaminants cannot be composited, your proposal to allow a higher MDL for these contaminants would be less stringent than the Federal regulation.

We will therefore approve your proposal to allow MDLs that meet the rule-of-thumb, as described earlier, except for Ethylene Dibromide, Toxaphene, Aldicarb sulfone, PCBs, and Vinyl Chloride. For these contaminants, the listed MDL must be employed. For the remaining contaminants, you must meet the rule-of-thumb.

2. Private laboratories are required to use only United States Environmental Protection Agency (U.S. EPA) approved drinking water methods, and must meet the U.S. EPA MDLs for all compliance monitoring. A statement in the waiver policy indicating the proposed scans and related MDLs will be used only by the State Laboratory, and not by private laboratories will be sufficient.

3. Please describe the procedures the MDPH will follow in making individual waiver decisions. This should conform with the Sampling Waiver Guidance.

4. We have been told that the waiver reporting form is being revised. Please enclose an example of the new form in your response.

We complement you on your thoughtful and insightful proposal, and regret that we were unable to provide response as promptly as we would have liked. I am confident that final approval will be likely upon receipt of the items identified above. If you have questions, please contact me or Thomas Matheson, of the Technical Support Unit, at (312) 886-6204.

Sincerely yours,

Edward P. Watters

Edward P. Watters, Chief
Safe Drinking Water Branch

cc: Elgar Brown, MDPH

STATE OF MICHIGAN

JOHN ENGLER, GOVERNOR
DEPARTMENT OF PUBLIC HEALTH
3423 N. LOGAN/MARTIN L. KING JR., BLVD.
P.O. BOX 30195, LANSING, MICHIGAN 48909
Vernice Davis Anthony, Director

November 23, 1992

Mr. Edward P. Watters, Chief
Safe Drinking Water Branch (WD-17J)
United States Environmental Protection Agency
Region 5
77 West Jackson Boulevard
Chicago, Illinois 60604

Subject: Phase II and V Waiver Proposal

Dear Mr. Watters:

In your letter of October 23, 1992, you raised several questions concerning our waiver proposal for the phase II and V contaminant monitoring. We will try to address these as they were listed in your letter.

1. You indicated that "standard analytical practice recommends that MDLs should be no greater than one-third of the appropriate value for the analyte.." We can probably meet this criteria for the phase II and V contaminants that are part of our "limited scan" for the SOCs. We feel your reasoning for some of these criteria is somewhat flawed. For example, the MDL for aldicarb is .0005. If a five sample composite is used, the effective MDL becomes .0025. The MCL for aldicarb is .003. In this case, you are allowing an effective MDL that is 83% of the MCL. This is acceptable, but if the MDL is greater than one-fifth of the MCL, then the given MDL must be used. We believe the "rule of thumb of one-third" can be used in these cases.

   We will try to address your comments contaminant by contaminant:

   Benzo(a)pyrene - not part of our "limited scan waiver".

   Pentachlorophenol - one-third of MCL = .0003. Our MDL is .0005. We will need to lower this MDL slightly.

Diethylhexylphthalate - not part of our "limited scan waiver".

Dinoseb - one-third of the MCL = .0023. Our MDL is .007. We will need to lower this MDL.

Endrin - one-third of the MCL = .0007. Our MDL is .0001. Our lab is O.K.

Hexachlorobenzene - one-third of the MCL = .0003. Our MDL is .0001. Our lab is O.K.

PAHs - not part of the "limited scan waiver".

Phthalates and Dioxin - not part of the "limited scan waiver".

EDB - not part of the "limited scan waiver".

Toxaphene - MDL is .001. Our MDL is .001. Our lab is O.K.

Aldicarb Sulfone - MDL is .0008. Our MDL is .0007. Our lab is O.K.

PCBs - five times the MDL = .0005. Our MDL is .0005. We will need to lower this MDL. We will further investigate occurrence of this contaminant in a statewide study.

Vinyl Chloride - one-third of the MCL = .0007. Our MDL is .0007. Our lab is O.K.

2. A statement indicating the proposed scans and related MDLs will be used only by the State Laboratory will be included in the waiver policy.

3. Our procedure for making the individual waiver decisions was addressed in our flow chart that has been sent to your office. Typically, an engineer will determine if a ground water system is eligible for a "limited scan waiver". If the well is properly constructed and isolated, it very probably will qualify for the waiver. The samples for the SOC analyses are taken within the "six month summer window". If there are no detects, additional monitoring is waived in the first three year period.

ELGAR
BROWN, MDPH

REVISED DRAFT
4/12/93
J. DALESSANDRO

WD-17J

James K. Cleland, P.E., Chief
Division of Water Supply
Michigan Department of Public Health
3423 North Logan/Martin L. King Jr., Blvd.
P.O. Box 30195
Lansing, Michigan 48909

Dear Mr. Cleland:

We have reviewed your November 23, 1992 letter responding to our previous comments on the State's monitoring waiver plans. Region 5 will approve the Michigan Department of Public Health's (MDPH) monitoring waiver program, conditioned on the understanding that MDPH will incorporate the modifications outlined in the November 23, 1992 letter in the State's rule package submittal. These modifications include:

1) Reducing the method detection limit (MDL) for dinoseb from 0.007 milligrams per liter (mg/l) to 0.0023 mg/l.

2) Reducing the MDL for Benzo(a)pyrene from 0.0005 mg/l to 0.00006 mg/l.

3) Reducing the MDL for pentachlorophenol from 0.0005 mg/l to 0.0003 mg/l.

4) Reducing the MDL for Di(2-ethylhexyl)phthalate from 0.005 mg/l to 0.0013 mg/l.

The MDPH intends to conduct "limited scan" pesticide monitoring for sources that are constructed according to State codes, but may have some susceptibility to contamination based on pesticide use, or a lack of available data to accurately document the non-existence of a pesticide. The results provided by the scans will be used to support the State's decisions regarding approval of monitoring waivers. Waivers will not be approved for contaminants detected by the scans.

Use of the scans is intended to increase the State's ability to award waivers from actual compliance monitoring. However, improved efficiency of the laboratory resources requires the scans to use method detection limits (MDL) greater than those specified by the Federal regulations for compliance samples. To achieve this goal, the MDPH has proposed using MDLs up to 50% of the Maximum Contaminant Level (MCL) for the limited scans and disallowing the use of composite samples.

The MDPH justified this proposal by claiming that the composite sample analyses permitted under 40 CFR. §141(h)(10) results in an "effective MDL" for uncomposited samples that is five times greater than the MDLs specified in the rule. For several parameters, this "effective MDL" exceeds 50% of the MCL.

The rationale for the MDPH's proposal has been discussed with our Quality Assurance Section. While they agree with the technical basis of the proposal, "standard analytical practice recommends that MDLs should be no greater than one-third of the appropriate value for the analyte and matrix of concern" (i.e., the MCL). To comply with this rule-of-thumb, the MDLs for Dinoseb, Benzo(a)pyrene, Pentachlorophenol and Di(ethylhexyl)phthalate must be reduced to the limits specified above. Other compounds that are included in the scans where the "effective MDL" exceeds 1/3 of the MCL include Carbofuran, Dalapon, Methoxychlor, Oxamyl (Vydate), and 1,2,4-Trichlorobenzene. However, the MDPH has previously agreed to employ acceptable MDLs for these parameters.

Aldicarb sulfone, Ethylene dibromide (EDB), Polychlorinated biphenyls (PCB), Toxaphene, and Vinyl Chloride cannot be composited because the resulting "effective MDLs" will exceed their respective MCLs. Since these analyses may not be composited, the MDPH's proposal to allow a higher MDL for these contaminants would be less stringent than the Federal regulation.

MICHIGAN DEPARTMENT OF PUBLIC HEALTH

DATE: 04/13/93

TO: Elgar Brown
Water Supply Division - BEOH

FROM: Dr. Williams. Ph.D., Chief
Water Analysis Section - BIDC

SUBJECT: Detection Limits

John Snyder, Senior Chemist, has reviewed the MDL data for the proposed monitoring methods regarding the attached letter. He reports that we will be able to meet requirements for dinoseb, pentachlorophenol, and di(2-ethylhexyl)-phthalate. However, although EPA Method 525.1 is approved for Benzo(a)pyrene testing, the method detection limit is 0.0001 mg/L. Our research indicates this to be the minimum level we can obtain with the method.

It is my understanding that benzo(a)pyrene (PNA) testing was to apply only to systems employing coal tar linings,and that PNA's will not be reported under limited SOC monitoring. I do not understand how this is related to the general waiver proposals you have discussed.

Assuming that PNA testing is limited, we will be able to reduce the MDL by:

1. The new GC/ITD system on order should increase sensitivity by a factor of about 10, projected 525.1 MDL~0.00002 mg/L.

2. It appears that new HPLC equipment on order would allow us to develop yet another scan for PNA (EPA Method 550.1) with MDL~0.00002 mg/L.

We are beginning to reach a consensus in the laboratory regarding EPA's use of what we believe are "minimum possible" method detection limits. While we will be able to quote these limits as determined according to EPA protocol, we consider them to be valid only in the absence of any sample related interference and with all method related interferences related to reagents, column conditions, etc. at an absolute minimum. We must then deal with how to apply these in a realistic manner to sample reporting and how these relate to a "practical quantitation limit" (PQL). This is something we need to discuss and review with those in EPA that you deal with.

cc: Dr. Martin
Sandy
Albert
John Snyder

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

REPLY TO THE ATTENTION OF:

Mr. Elgar Brown, P.E.
Department OF Public Health
Division Of Water Supply

Fax No: (517) 335-8298
No. Of Pages: 2

Dear Mr. Brown:

As part of the final approval of the phase 2 & 5 waiver program, we have put together the attached table. This table lists the MCLs and MDls as specified by the Federal regulations, 5 sample composited MDL (5xMDL),the proposed 50% MCL, and a column indicating whether 50% MCL is less than the effective MDL (5xMDL).

We need to know Michigan's proposed MDL for the contaminants that are part of the limited scan (indicated by *) and also their 50% MCL is not less than 5xMDL (indicated by a NO on the fifth column).

It is our intention to have the final approval letter by early part of next week. If you have any questions, please give me a call at (312) 886-6171.

Sincerely,

Sahba Rouhani

MAXIMUM CONTAMINANT LEVELS & METH

MICHIGAN'S PROPOSAL OF

COMPARISON: is Michigan's MDL (50%

CONTAMINANTS	MCL	MDL	5 sample composited MDL	50% MCL	50%MCL < 5*MDL	MICHIGAN'S PROPOSED MDL
ORGANIC CHEMICALS	mg/L**	mg/L**	mg/L**	mg/L**		
Acrylamide	None	None				
* Adipate: Di(ethylhexyl)adipate *	0.5	0.0006	0.00300	0.25000	NO	.005
* Alachlor	0.002	0.0002	0.00100	0.00100	NO	
* Aldicarb	0.003	0.0005	0.00250	0.00150	YES	
* Aldicarb sulfone	0.002	0.0008	0.00400	0.00100	YES	
* Aldicarb sulfoxide	0.004	0.0005	0.00250	0.00200	YES	
* Atrazine	0.003	0.0001	0.00050	0.00150	NO	.001
Benzene	0.005	0.0005	0.00250	0.00250	NO	
* Carbofuran	0.04	0.0009	0.00450	0.02000	NO	
Carbon Tetrachloride	0.005	0.0005	0.00250	0.00250	NO	
Chlordane	0.002	0.0002	0.00100	0.00100	NO	
* 2,4 – D	0.07	0.0001	0.00050	0.03500	NO	.005
* Dalapon *	0.2	0.0010	0.00500	0.10000	NO	
Dibromochloropropane (DBCP)	0.0002	0.0000	0.00010	0.00010	NO	
o – Dichlorobenzene	0.6	0.0003	0.00250	0.30000	NO	
p – Dichlorobenzene	0.075	0.0005	0.00250	0.03750	NO	
1,2 – Dichloroethane	0.005	0.0005	0.00250	0.00250	NO	
1,1 – Dichloroethylene	0.007	0.0005	0.00250	0.00350	NO	
cis – 1,2 – Dichloroethylene	0.07	0.0005	0.00250	0.03500	NO	
trans – 1,2 – Dichloroethylene	0.1	0.0005	0.00250	0.05000	NO	
Dichloromethane (Methylene chloride) *	0.005	0.0005	0.00250	0.00250	NO	
1,2 – Dichloropropane	0.005	0.0005	0.00250	0.00250	NO	
* Dinoseb *	0.007	0.0002	0.00100	0.00350	NO	.0014
Diquat *	0.02	0.0004	0.00200	0.01000	NO	
Endothall *	0.1	0.0090	0.04500	0.05000	NO	
* Endrin *	0.002	0.0000	0.00005	0.00100	NO	.0001
Epichlorohydrin	None	None	None			
Ethylbenzene	0.7	0.0005	0.00250	0.35000	NO	
Ethylene dibromide (EDB)	0.00005	0.00001	0.00005	0.00003	YES	
Glyphosate *	0.7	0.00600	0.03000	0.35000	NO	
* Heptachlor	0.0004	0.00004	0.00020	0.00020	NO	
* Heptachlor epoxide	0.0002	0.00002	0.00010	0.00010	NO	
* Hexachlorobenzene	0.001	0.00010	0.00050	0.00050	NO	
* Hexachlorocyclopentadiene (HEX) *	0.05	0.00010	0.00050	0.02500	NO	.001
* Lindane	0.0002	0.00002	0.00010	0.00010	NO	
* Methoxychlor	0.04	0.00010	0.00050	0.02000	NO	
Monochlorobenzene	0.1	0.00050	0.00250	0.05000	NO	
* Oxamyl (Vydate) *	0.2	0.00200	0.01000	0.10000	NO	
* PAHs-[Benzo(a)pyrene] *	0.0002	0.00002	0.00010	0.00010	NO	.0005
Pentachlorophenol	0.001	0.00004	0.00020	0.00050	NO	.00002
Phthalates-[Di(ethylhexyl)phthalate] *	0.004	0.00060	0.00300	0.00200	YES	.005
* Picloram *	0.5	0.00010	0.00050	0.25000	NO	.02
Polychlorinated biphenyls (PCB)	0.0005	0.00010	0.00050	0.00025	YES	
* Simazine *	0.004	0.00007	0.00035	0.00200	NO	.0005
Styrene	0.1	0.00050	0.00250	0.05000	NO	
2,3,7,8 – TCDD (Dioxin) *	0.00000	0.00000	0.00000	0.00000	YES	
Tetrachloroethylene	0.005	0.00050	0.00250	0.00250	NO	
Toluene	1	0.00050	0.00250	0.50000	NO	
* Toxaphene	0.003	0.00100	0.00500	0.00150	YES	
* 2,4,5 – TP (Silvex)	0.05	0.00020	0.00100	0.02500	NO	.005
* 1,2,4 – Trichlorobenzene *	0.009	0.00050	0.00250	0.00450	NO	
Trichloroethylene (TCE)	0.005	0.00050	0.00250	0.00250	NO	
1,1,1 – Trichloroethane	0.2	0.00050	0.00250	0.10000	NO	
1,1,2 – Trichloroethane *	0.005	0.00050	0.00250	0.00250	NO	
Vinyl Chloride	0.002	0.00050	0.00250	0.00100	YES	
Xylenes (total)	10	0.00050	0.00250	5.00000	NO	

* LIMITED SCAN CONTAMINANTS

STATE OF MICHIGAN

JOHN ENGLER, GOVERNOR
DEPARTMENT OF PUBLIC HEALTH
3423 N. LOGAN/MARTIN L. KING JR., BLVD.
P.O. BOX 30195, LANSING, MICHIGAN 48909
Vernice Davis Anthony, Director

DATE: May 26, 1993

TO: Sahba Rouhani
U.S. EPA Region 5
Chicago, Illinois

FROM: Wm. Elgar Brown
Michigan Dept. of Public Health
Lansing, Michigan

SUBJECT: Phase II/V Contaminants

In your recent fax and our telephone conversation of May 26, you requested that we list the phase II/V contaminants that are not covered in our "limited scan monitoring". The eleven contaminants that are not in these scans are:

asbestos
dioxin
PCB
EDB
DBCP
glyphosate
diquat
endothall
dalapon
di(ethylhexyl)adipate
di(ethylhexyl)phthalate

We will contract with a private lab to have a limited number of asbestos and dioxin samples analyzed. Our lab will be including the PCB analysis in the limited scan monitoring in the near future. We are requiring EBD and DBCP on any VOC positive samples. Glyphosate, diquat, endothall, and dalapon will be required on vulnerable ground water sources plus we may do some state-wide susceptibility monitoring. The adipates and phthalates will be done on a limited number of samples on a state-wide basis.

We hope this answers your questions, and we look forward to approval of our waiver program.

WEB:ae

REVISED WAIVER FORM AND FLOW CHART

MICHIGAN DEPARTMENT OF PUBLIC HEALTH

MEMORANDUM

DATE: May 25, 1993

TO: Water Supply Engineers

FROM: Wm. Elgar Brown WEB

SUBJECT: Waiver Form and Cyanide Monitoring

Attached is the revised waiver form that is to be used for the community water supply waivers for the phase II/V monitoring. This was discussed at the last staff meeting. Make copies as needed. I would like to discuss any candidates that you feel qualify for total waivers prior to the waiver being issued.

Also attached is a copy of the letter from EPA Region 5 that gives a waiver for cyanide, glyphosate, and nitrite monitoring based on a chlorine residual being present at the point of entry. If you have any questions concerning these items, please contact me.

WEB:ae

Attachments

cc: Division of Upper Peninsula
cc: Nathan Foote
cc: Bob Salkeld

PHASE II AND V VULNERABILITY ASSESSMENT FORM

System Name: _____

WSSN: _____

Population Served: _____

Number of Wells or Points-of-Entry: _____

Instructions: Use this form for interim vulnerability assessments until a wellhead protection area has been evaluated. If a wellhead program exists, refer to the contaminant source inventory for monitoring guidance.

	Well No.	Well No.	Well No.	Well No.
Source Code				
Well eligible for a Total Waiver (in accordance with guidance)				
Potential Pesticide Vulnerability (some uses in the area; well meets construction standards) Analyze limited SOC scans				
Probable Pesticide Vulnerability (e.g., inland rivers) No Waiver				
VOC vulnerability assessment completed and system eligible for waiver				
VOC gasoline derivatives detected (EDB monitoring required)				

Is there a chlorine residual at point-of entry? Yes ☐ No ☐

Has A.C. pipe been used in the distribution system? Yes ☐ No ☐

Have coal tar linings been used in the system? (Cast iron installed prior to 1970) Yes ☐ No ☐

I certify that the above information, to the best of my knowledge, is true and accurate.

_____ Signature

_____ Title

_____ Date

_____ Printed Name

_____ Supv. Initials

WEV7

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

REPLY TO THE ATTENTION OF:

WD-17J

MAY 05 1993

James K. Cleland, P.E.
Division of Water Supply
Bureau of Environmental and Occupational Health
Department of Public Health
3423 N. Logan/Martin L. King Jr. Blvd.
P.O. Box 30195
Lansing, Michigan 48909

RE: Susceptibility Waivers for Chlorinated Water Supplies

Dear Mr. Cleland:

This is in response to your April 6, 1993, letter informing us of a discussion regarding waivers for chlorinated water supplies that occurred at the Drinking Water Laboratory Certification Workshop of March 30, 1993. Your letter stated that a memorandum concerning State-Wide waivers would be sent to all Regional Offices of the United States Environmental Protection Agency.

As of this writing, I am not aware of this memorandum. However, my staff has consulted with several individuals within the Office of Ground Water and Drinking Water, and concluded that susceptibility waivers for certain contaminants will be acceptable.

The eligible contaminants include cyanide, nitrite and glyphosate. We have been informed that these contaminants are readily oxidized in the presence of chlorine, and therefore, would not be detectable in water supplies that maintain a chlorine residual. Although similar reactions are expected to occur in the presence of ozone or chloramines, the Region has not obtained sufficient evidence to support this conclusion.

Barring the receipt of conflicting information, Region 5 will respect our States' approval of susceptibility waivers for cyanide and glyphosate based on the public water supply's (PWS) ability to maintain a detectable chlorine residual within the distribution system. The PWSs would have to maintain appropriate documentation, such as daily residual logs, to support the waivers.

Waivers from the initial nitrite monitoring will require a revision of 141.23(e). However, since repeat monitoring requirements (141.23(e)(2)) are to be established by the State, maintenance of a detectable chlorine residual will be adequate to waive repeat monitoring.

Your letter included endothall as one of the contaminants that could not be detected in a chlorinated water supply. We have not located any information to support this request, so maintenance of a chlorine residual will not provide sufficient justification to waive monitoring for endothall.

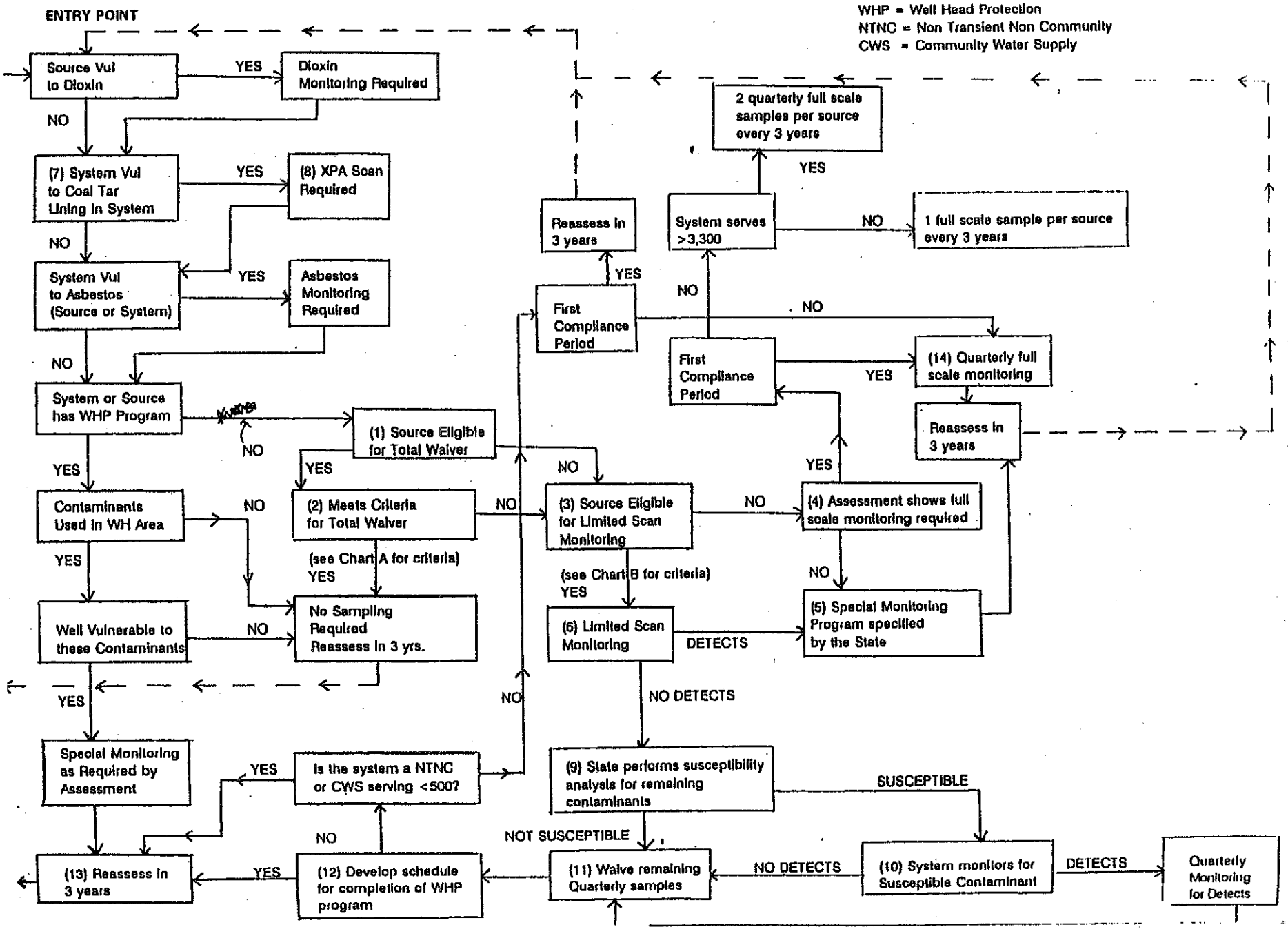
Please contact John Dalessandro at (312) 886-6202 with any questions, comments, suggestions, or additional information.

Sincerely yours,

Charlene J. Denys, Chief
Drinking Water Section

PHASE II & V WAIVER FLOW CHART

Vul = Vulnerable
WHP = Well Head Protection
NTNC = Non Transient Non Community
CWS = Community Water Supply



CORRESPONDENCE

STATE OF MICHIGAN

JOHN ENGLER, GOVERNOR
DEPARTMENT OF PUBLIC HEALTH
3423 N. LOGAN/MARTIN L. KING JR., BLVD.
P.O. BOX 30195, LANSING, MICHIGAN 48909
Vernice Davis Anthony, Director

May 13, 1992

Mr. Edward P. Watters, Chief
Safe Drinking Water Branch
United States Environmental Protection Agency
Region 5 (WD-17J)
77 West Jackson Boulevard
Chicago, Illinois 60604

Dear Mr. Watters:

In your letter of March 27, 1992, you addressed several comments concerning the proposed waiver policy that the Michigan Department of Public Health is developing for implementing Phase II and V regulations. The policy can be altered or explained to address these comments. These comments will be addressed as listed in your letter. A revised copy along with your comment letter is enclosed.

Previous policy for determining Method Detection Limits (MDL's) by the Water Analysis Section of the MDPH Laboratory has stressed assurance that detection is valid and that the identity of compounds detected may be clearly confirmed. Newly established MCL's appear to be set at about the same levels dictated by previous MDPH lab policy. The laboratory has reduced MDL values in cases of relatively low MCLs, and will be reporting detection of some compounds below levels allowing confident MS confirmation. Reporting MDL's will be at or below 50% of MCL's for all regulated compounds. All of the experienced analysts in the water lab believe the MDL's cited in EPA methods are artificially low in many cases for use in reporting of unknown samples and cannot be ethically used for reporting field samples even though techniques used are equivalent to those cited in EPA methodology. Also, the MDPH lab will <u>not</u> composite samples. Allowing up to a five sample composite as written, the Phase II rule effectively increases any laboratory MDL by a factor of five. The Michigan approach of meeting at least 50% of the MCL and not allowing composites will provide effective detection.

The public water supplies that must do distribution system monitoring for the XPA scan will also address the monitoring requirements of their sources. A clarification sentence has been added.

Asbestos monitoring will be done on selected systems with corrosive water that have asbestos cement pipe. We estimate analyzing 25 asbestos samples initially and additional ones if needed. The dioxin monitoring will be done in areas near paper mills and in areas near the Midland Dow Chemical plant at vulnerable sources. Again, there will probably be 25 samples initially.

Pentachlorophenol has been added to the limited scan monitoring.

Any system with a pesticide detect will be required to monitor for diquat, endothall, and glyphosate.

The special monitoring as required by assessment would be monitoring for the contaminant that is used in the wellhead area. The monitoring frequency would depend on the time of travel, the location within the wellhead area, the degree of threat, and other factors that would be site specific.

The reference to quarterly sampling for systems greater than 3300 has been corrected.

Chart A

As systems develop wellhead protection areas, the waiver decisions will be concentrated in these areas.

The terms "certain region" and "arbitrary distance" are intentionally vague. These must be site specific determinations. We do not anticipate very many total waivers since we plan to have most systems do limited scan monitoring. The total waivers will be on a case-by-case basis. We will review these decisions with Region V EPA during our mid-year evaluation.

"Deep protected aquifer" has been changed to "deep confined aquifer".

The terminology has been changed to "unconfined aquifer".

We agree with Region V on the number of systems qualifying for a total waiver. The number of systems qualifying for a total waiver would be very small.

The state will work with the Michigan Department of Agriculture to develop a use statement for any contaminants that would qualify for a use waiver. Possible candidates would be dioxin, EDB, DBCP, and di(ethylhexyl)adipate.

Items that may Eliminate a System from a Total Waiver

We have added the items from your letter to the list of items that may eliminate a system from a total waiver.

We do not plan to totally waive any surface water source from monitoring, but we do plan to use the limited scan monitoring on many of the Great Lakes sources.

Item eight has been modified to reflect your comment.

Chart B

Criteria for Limited Scan Monitoring

The first item has been addressed as suggested.

We have added "Wells in areas of limited pesticide use." although you did not specify what limited meant. We will use logic to make this determination.

Reasonable depth could be site specific although a minimum would be at least 25 feet since a casing depth of 25 feet is required on all wells.

Items that may Eliminate a System from Limited Scan Monitoring

"Karst formations" has been changed to "Karst areas".

"Very deep" again is a site specific determination, but will probably relate to wells over 100 feet. This determination on vulnerability will depend on the area, the degree of fracturing, and potential for contamination.

"Most" has been deleted from the nitrate sources.

The word contaminant has been included in item 6.

We have included "Wells under the direct influence of surface water in areas with high pesticide use".

We hope these changes answer your concerns with the Michigan waiver policy for the Phase II and V contaminant monitoring. We will implement this policy for the public water supplies in Michigan. If you have additional comments, please contact us.

Very truly yours,

James K. Cleland, P.E., Chief
Division of Water Supply
Bureau of Environmental
and Occupational Health

JKC:WBE

Enclosures

cc: Dr. Ted Williams

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

REPLY TO THE ATTENTION OF:

Mr. Elgar Brown, P.E.
Department OF Public Health
Division Of Water Supply

Fax No: (517) 335-8298
No. Of Pages: 2

Dear Mr. Brown:

As part of the final approval of the phase 2 & 5 waiver program, we have put together the attached table. This table lists the MCLs and MDls as specified by the Federal regulations, 5 sample composited MDL (5xMDL),the proposed 50% MCL, and a column indicating whether 50% MCL is less than the effective MDL (5xMDL).

We need to know Michigan's proposed MDL for the contaminants that are part of the limited scan (indicated by *) and also their 50% MCL is not less than 5xMDL (indicated by a NO on the fifth column).

It is our intention to have the final approval letter by early part of next week. If you have any questions, please give me a call at (312) 886-6171.

Sincerely,

Sahba Rouhani

MAXIMUM CONTAMINANT LEVELS & METH

MICHIGAN'S PROPOSAL OF

COMPARISON: is Michigan's MDL (50%

CONTAMINANTS	MCL	MDL	5 sample composited MDL	50% MCL	50%MCL < 5*MDL	MICHIGAN'S PROPOSED MDL
ORGANIC CHEMICALS	mg/L**	mg/L**	mg/L**	mg/L**		
Acrylamide	None	None				
* Adipate (Di(ethylhexyl)adipate) *	0.5	0.0006	0.00300	0.25000	NO	.005
* Alachlor	0.002	0.0002	0.00100	0.00100	NO	
* Aldicarb	0.003	0.0005	0.00250	0.00150	YES	
* Aldicarb sulfone	0.002	0.0008	0.00400	0.00100	YES	
* Aldicarb sulfoxide	0.004	0.0005	0.00250	0.00200	YES	
* Atrazine	0.003	0.0001	0.00050	0.00150	NO	.001
Benzene	0.005	0.0005	0.00250	0.00250	NO	
* Carbofuran	0.04	0.0009	0.00450	0.02000	NO	
Carbon Tetrachloride	0.005	0.0005	0.00250	0.00250	NO	
Chlordane	0.002	0.0002	0.00100	0.00100	NO	
* 2,4 - D	0.07	0.0001	0.00050	0.03500	NO	.005
* Dalapon *	0.2	0.0010	0.00500	0.10000	NO	
Dibromochloropropane (DBCP)	0.0002	0.0000	0.00010	0.00010	NO	
o - Dichlorobenzene	0.6	0.0005	0.00250	0.30000	NO	
p - Dichlorobenzene	0.075	0.0005	0.00250	0.03750	NO	
1,2 - Dichloroethane	0.005	0.0005	0.00250	0.00250	NO	
1,1 - Dichloroethylene	0.007	0.0005	0.00250	0.00350	NO	
cis - 1,2 - Dichloroethylene	0.07	0.0005	0.00250	0.03500	NO	
trans - 1,2 - Dichloroethylene	0.1	0.0005	0.00250	0.05000	NO	
Dichloromethane (Methylene chloride) *	0.005	0.0005	0.00250	0.00250	NO	
1,2 - Dichloropropane	0.005	0.0005	0.00250	0.00250	NO	
* Dinoseb *	0.007	0.0002	0.00100	0.00350	NO	.00014
Diquat *	0.02	0.0004	0.00200	0.01000	NO	
Endothall *	0.1	0.0090	0.04500	0.05000	NO	
* Endrin *	0.002	0.0000	0.00005	0.00100	NO	.0001
Epichlorohydrin	None	None	None			
Ethylbenzene	0.7	0.0005	0.00250	0.35000	NO	
Ethylene dibromide (EDB)	0.00005	0.00001	0.00005	0.00003	YES	
Glyphosate *	0.7	0.00600	0.03000	0.35000	NO	
* Heptachlor	0.0004	0.00004	0.00020	0.00020	NO	
* Heptachlor epoxide	0.0002	0.00002	0.00010	0.00010	NO	
* Hexachlorobenzene *	0.001	0.00010	0.00050	0.00050	NO	
* Hexachlorocyclopentadiene (HEX) *	0.05	0.00010	0.00050	0.02500	NO	.001
* Lindane	0.0002	0.00002	0.00010	0.00010	NO	
* Methoxychlor	0.04	0.00010	0.00050	0.02000	NO	
Monochlorobenzene	0.1	0.00050	0.00250	0.05000	NO	
* Oxamyl (Vydate) *	0.2	0.00200	0.01000	0.10000	NO	
* PAHs (Benzo(a)pyrene) *	0.0002	0.00003	0.00010	0.00010	NO	.0005
Pentachlorophenol	0.001	0.00004	0.00020	0.00050	NO	.00002
Phthalates (Di(ethylhexyl)phthalate) *	0.004	0.00060	0.00300	0.00200	YES	.005
* Picloram *	0.5	0.00010	0.00050	0.25000	NO	.02
Polychlorinated biphenyls (PCB)	0.0005	0.00010	0.00050	0.00025	YES	
* Simazine *	0.004	0.00007	0.00035	0.00200	NO	.0005
Styrene	0.1	0.00050	0.00250	0.05000	NO	
2,3,7,8 - TCDD (Dioxin) *	0.00000	0.00000	0.00000	0.00000	YES	
Tetrachloroethylene	0.005	0.00050	0.00250	0.00250	NO	
Toluene	1	0.00050	0.00250	0.50000	NO	
* Toxaphene *	0.003	0.00100	0.00500	0.00150	YES	
* 2,4,5 - TP (Silvex)	0.05	0.00020	0.00100	0.02500	NO	.005
* 1,2,4 - Trichlorobenzene *	0.009	0.00050	0.00250	0.00450	NO	
Trichloroethylene (TCE)	0.005	0.00050	0.00250	0.00250	NO	
1,1,1 - Trichloroethane	0.2	0.00050	0.00250	0.10000	NO	
1,1,2 - Trichloroethane *	0.005	0.00050	0.00250	0.00250	NO	
Vinyl Chloride	0.002	0.00050	0.00250	0.00100	YES	
Xylenes (total)	10	0.00050	0.00250	5.00000	NO	

* LIMITED SCAN CONTAMINANTS

STATE OF MICHIGAN

JOHN ENGLER, GOVERNOR

DEPARTMENT OF PUBLIC HEALTH

3423 N. LOGAN/MARTIN L. KING JR., BLVD.

P.O. BOX 30195, LANSING, MICHIGAN 48909

Vernice Davis Anthony, Director

DATE: May 26, 1993

TO: Sahba Rouhani
U.S. EPA Region 5
Chicago, Illinois

FROM: Wm. Elgar Brown
Michigan Dept. of Public Health
Lansing, Michigan

SUBJECT: Phase II/V Contaminants

In your recent fax and our telephone conversation of May 26, you requested that we list the phase II/V contaminants that are not covered in our "limited scan monitoring". The eleven contaminants that are not in these scans are:

asbestos
dioxin
PCB
EDB
DBCP
glyphosate
diquat
endothall
dalapon
di(ethylhexyl)adipate
di(ethylhexyl)phthalate

We will contract with a private lab to have a limited number of asbestos and dioxin samples analyzed. Our lab will be including the PCB analysis in the limited scan monitoring in the near future. We are requiring EBD and DBCP on any VOC positive samples. Glyphosate, diquat, endothall, and dalapon will be required on vulnerable ground water sources plus we may do some state-wide susceptibility monitoring. The adipates and phthalates will be done on a limited number of samples on a state-wide basis.

We hope this answers your questions, and we look forward to approval of our waiver program.

WEB:ae

REVISED WAIVER FORM AND FLOW CHART

MICHIGAN DEPARTMENT OF PUBLIC HEALTH

MEMORANDUM

DATE: May 25, 1993

TO: Water Supply Engineers

FROM: Wm. Elgar Brown WEB

SUBJECT: Waiver Form and Cyanide Monitoring

Attached is the revised waiver form that is to be used for the community water supply waivers for the phase II/V monitoring. This was discussed at the last staff meeting. Make copies as needed. I would like to discuss any candidates that you feel qualify for total waivers prior to the waiver being issued.

Also attached is a copy of the letter from EPA Region 5 that gives a waiver for cyanide, glyphosate, and nitrite monitoring based on a chlorine residual being present at the point of entry. If you have any questions concerning these items, please contact me.

WEB:ae

Attachments

cc: Division of Upper Peninsula
cc: Nathan Foote
cc: Bob Salkeld

PHASE II AND V VULNERABILITY ASSESSMENT FORM

System Name: _____

WSSN: _____

Population Served: _____

Number of Wells or Points-of-Entry: _____

Instructions: Use this form for interim vulnerability assessments until a wellhead protection area has been evaluated. If a wellhead program exists, refer to the contaminant source inventory for monitoring guidance.

	Well No.	Well No.	Well No.	Well No.
Source Code				
Well eligible for a Total Waiver (in accordance with guidance)				
Potential Pesticide Vulnerability (some uses in the area; well meets construction standards) Analyze limited SOC scans				
Probable Pesticide Vulnerability (e.g., inland rivers) No Waiver				
VOC vulnerability assessment completed and system eligible for waiver				
VOC gasoline derivatives detected (EDB monitoring required)				

Is there a chlorine residual at point-of entry? Yes ☐ No ☐

Has A.C. pipe been used in the distribution system? Yes ☐ No ☐

Have coal tar linings been used in the system? (Cast iron installed prior to 1970) Yes ☐ No ☐

I certify that the above information, to the best of my knowledge, is true and accurate.

_____ Signature

_____ Title

_____ Date

_____ Printed Name

_____ Supv. Initials

WE17

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

REPLY TO THE ATTENTION OF:

WD-17J

MAY 05 1993

James K. Cleland, P.E.
Division of Water Supply
Bureau of Environmental and Occupational Health
Department of Public Health
3423 N. Logan/Martin L. King Jr. Blvd.
P.O. Box 30195
Lansing, Michigan 48909

RE: Susceptibility Waivers for Chlorinated Water Supplies

Dear Mr. Cleland:

This is in response to your April 6, 1993, letter informing us of a discussion regarding waivers for chlorinated water supplies that occurred at the Drinking Water Laboratory Certification Workshop of March 30, 1993. Your letter stated that a memorandum concerning State-Wide waivers would be sent to all Regional Offices of the United States Environmental Protection Agency.

As of this writing, I am not aware of this memorandum. However, my staff has consulted with several individuals within the Office of Ground Water and Drinking Water, and concluded that susceptibility waivers for certain contaminants will be acceptable.

The eligible contaminants include cyanide, nitrite and glyphosate. We have been informed that these contaminants are readily oxidized in the presence of chlorine, and therefore, would not be detectable in water supplies that maintain a chlorine residual. Although similar reactions are expected to occur in the presence of ozone or chloramines, the Region has not obtained sufficient evidence to support this conclusion.

Barring the receipt of conflicting information, Region 5 will respect our States' approval of susceptibility waivers for cyanide and glyphosate based on the public water supply's (PWS) ability to maintain a detectable chlorine residual within the distribution system. The PWSs would have to maintain appropriate documentation, such as daily residual logs, to support the waivers.

Waivers from the initial nitrite monitoring will require a revision of 141.23(e). However, since repeat monitoring requirements (141.23(e)(2)) are to be established by the State, maintenance of a detectable chlorine residual will be adequate to waive repeat monitoring.

Your letter included endothall as one of the contaminants that could not be detected in a chlorinated water supply. We have not located any information to support this request, so maintenance of a chlorine residual will not provide sufficient justification to waive monitoring for endothall.

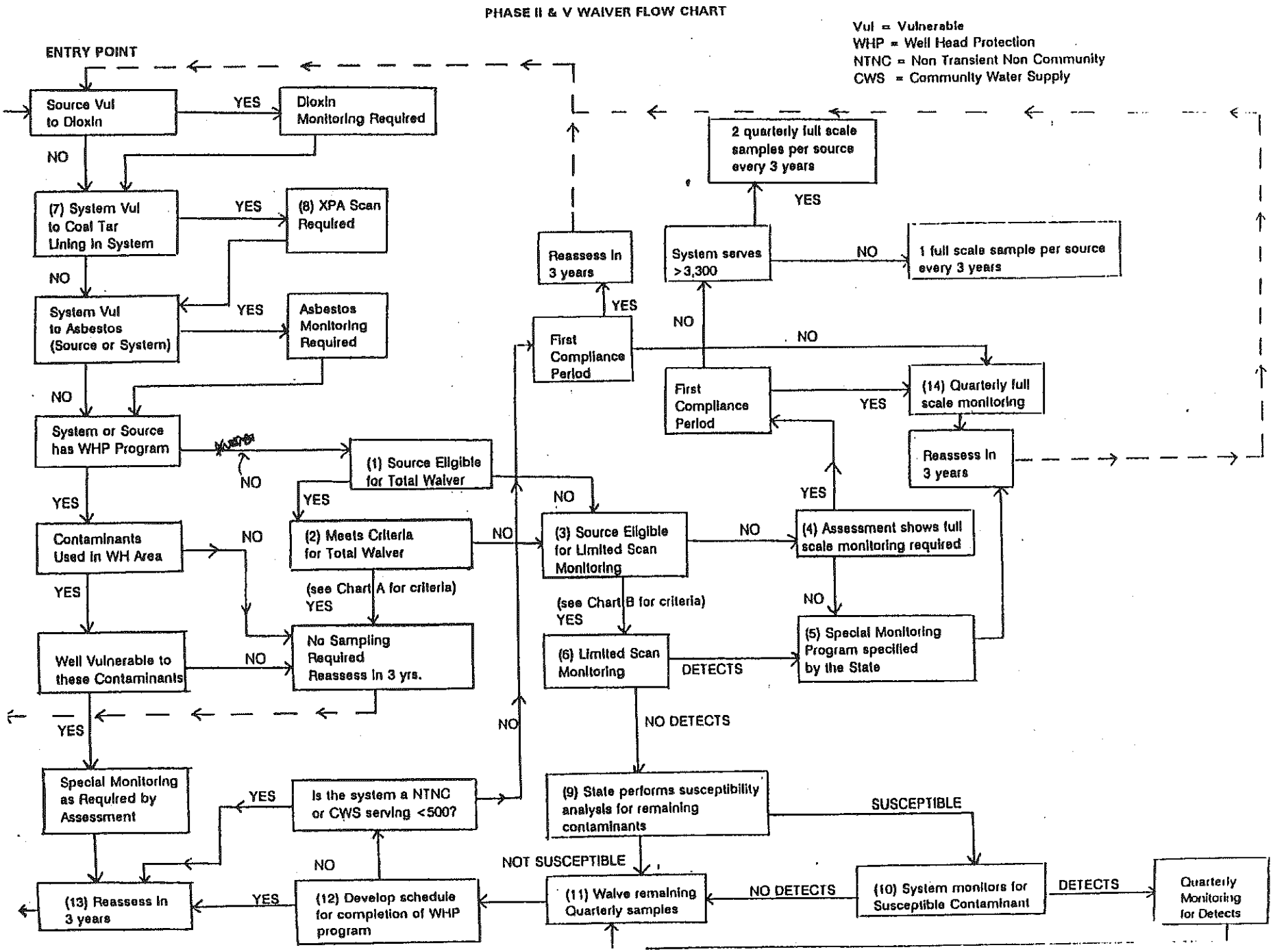
Please contact John Dalessandro at (312) 886-6202 with any questions, comments, suggestions, or additional information.

Sincerely yours,

Charlene J. Denys, Chief
Drinking Water Section

PHASE II & V WAIVER FLOW CHART

Vul = Vulnerable
WHP = Well Head Protection
NTNC = Non Transient Non Community
CWS = Community Water Supply



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

REPLY TO THE ATTENTION OF:

WD-17J

MAR 27 1992

James K. Cleland, P.E., Chief
Division of Water Supply
Michigan Department of Public Health
3423 North Logan/Martin L. King Jr., Blvd.
P.O. Box 30195
Lansing, Michigan 48909

Dear Mr. Cleland:

My staff have reviewed Michigan's January 13, 1992 Waiver Policy for Phase II and V. Generally, this proposal follows the regulatory intent more closely than did the original proposal submitted in September of 1991. The following comments on the latest proposal are changes needed to make the document approvable.

The scans used by the State (XAH, XLP, XNP, and XPI) must have a method detection limit equal to the methods identified in the Federal Regulations.

On page two of the proposed Waiver Policy, item IV describes those systems that must do the XPA scan monitoring. This group of wells also must be required to do a full or partial scan.

On page two, item V discusses the State undertaking limited monitoring for asbestos and dioxin at the "most vulnerable" sites. The State must identify how the "most vulnerable" sites are determined. In addition, the State's method for determining vulnerability must be described.

On page two, the basis for issuing a waiver for pentachlorophenol (was not detected in the National Pesticide Survey) is insufficient. Pentachlorophenol may have limited use, but as a wood preservative, has a widespread distribution. Additional criteria for issuing a waiver for this contaminant must be defined.

The first paragraph of page three states that vulnerable supplies may be required to monitor for diquat, endothall, and glyphosate. Systems with pesticide detections must be required to monitor for these pesticides, unless specific "use" waivers have been granted.

Phase II and V Waiver Flow chart

The flow chart refers to "special monitoring as required by assessment." You must define "special monitoring."

The pesticide monitoring requirements in the flow chart are inaccurate. Pesticide monitoring requires two quarterly samples for systems serving greater than 3,300 people. This inaccuracy in the flow chart must be corrected.

Chart A

Criteria Considerations for Total Waivers

The proposed Waiver Policy should consider the draft Regional guidance by establishing a monitoring waiver review area that factors in the State's developing wellhead protection area delineation criteria and methods.

The terms "certain region" and "arbitrary distance" must be defined. The definitions should comply with the draft Regional Monitoring Waiver guidance.

Item 3 refers to a "deep protected aquifer;" this should be described as a deep confined aquifer.

Item 4 describes "a deep aquifer that has no aquitard above it." The terminology should reflect the acceptable term "unconfined aquifer" in describing this hydrogeological situation.

Although the Federal Regulations do not disallow the issuance of waivers for all the contaminants regulated under the Phase II and Phase V Regulations, Region 5 believes the number of systems qualifying for a "total waiver" would be relatively small.

The State should include a statement from the State Agricultural Department certifying the non-use of certain pesticides and describing the Department's enforcement program, if a State-wide "use" waiver is issued for any pesticide regulated under the Phase II or Phase V Regulations.

Items that may eliminate a system from a total waiver.

This list should include: Proximity to pesticide mixing sites, ground water wells under the direct influence of surface water, and previous susceptibility studies indicating the system is susceptible to contamination.

According to the draft Regional Monitoring Waiver guidance, a surface water system is not eligible for waivers without an initial round of sampling.

Item 8 refers to a "High water table aquifer," this should be modified to a "Shallow unconfined aquifer."

Chart B

Criteria for Limited Scan Monitoring

The term "water table" should be correctly identified as "unconfined."

Those systems located in areas with limited pesticide use should be included in the criteria for limited scan monitoring.

The term "reasonable depth" in item 2 must be defined.

Items that may eliminate a system from limited scan monitoring.

"Karst formations" should be identified as "karst areas."

The criteria for a "very deep" well must be defined.

In item 5, "Most high nitrate sources" must be changed to "High nitrate sources."

Item 6 should be modified to read "Proximity to high risk contaminant sources."

This list should include: ground water wells under the direct influence of surface water in those areas with pesticide use.

The Ground Water Protection Branch compliments the proposed Waiver Policy that has wellhead protection factored in as the ultimate goal of the waiver process.

With some modifications, this proposal for a monitoring waiver program should be acceptable for use in the Phase II and Phase V Regulations. Please keep us informed on the progress of development of Michigan's monitoring waiver program. If you have questions or need additional information, please contact Thomas Matheson, of my staff, at (312) 886-6204.

Sincerely yours,

Edward P. Watters

Edward P. Watters, Chief
Safe Drinking Water Branch

ELGAR
BROWN, MDPH

REVISED DRAFT
4/12/93
J. DALESSANDRO

WD-17J

James K. Cleland, P.E., Chief
Division of Water Supply
Michigan Department of Public Health
3423 North Logan/Martin L. King Jr., Blvd.
P.O. Box 30195
Lansing, Michigan 48909

Dear Mr. Cleland:

We have reviewed your November 23, 1992 letter responding to our previous comments on the State's monitoring waiver plans. Region 5 will approve the Michigan Department of Public Health's (MDPH) monitoring waiver program, conditioned on the understanding that MDPH will incorporate the modifications outlined in the November 23, 1992 letter in the State's rule package submittal. These modifications include:

1) Reducing the method detection limit (MDL) for dinoseb from 0.007 milligrams per liter (mg/l) to 0.0023 mg/l.

2) Reducing the MDL for Benzo(a)pyrene from 0.0005 mg/l to 0.00008 mg/l.

3) Reducing the MDL for pentachlorophenol from 0.0005 mg/l to 0.0003 mg/l.

4) Reducing the MDL for Di(2-ethylhexyl)phthalate from 0.005 mg/l to 0.0013 mg/l.

The MDPH intends to conduct "limited scan" pesticide monitoring for sources that are constructed according to State codes, but may have some susceptibility to contamination based on pesticide use, or a lack of available data to accurately document the non-existence of a pesticide. The results provided by the scans will be used to support the State's decisions regarding approval of monitoring waivers. Waivers will not be approved for contaminants detected by the scans.

Use of the scans is intended to increase the State's ability to award waivers from actual compliance monitoring. However, improved efficiency of the laboratory resources requires the scans to use method detection limits (MDL) greater than those specified by the Federal regulations for compliance samples. To achieve this goal, the MDPH has proposed using MDLs up to 50% of the Maximum Contaminant Level (MCL) for the limited scans and disallowing the use of composite samples.

The MDPH justified this proposal by claiming that the composite sample analyses permitted under 40 CFR. §141(h)(10) results in an "effective MDL" for uncomposited samples that is five times greater than the MDLs specified in the rule. For several parameters, this "effective MDL" exceeds 50% of the MCL.

The rationale for the MDPH's proposal has been discussed with our Quality Assurance Section. While they agree with the technical basis of the proposal, "standard analytical practice recommends that MDLs should be no greater than one-third of the appropriate value for the analyte and matrix of concern" (i.e., the MCL). To comply with this rule-of-thumb, the MDLs for Dinoseb, Benzo(a)pyrene, Pentachlorophenol and Di(ethylhexyl)phthalate must be reduced to the limits specified above. Other compounds that are included in the scans where the "effective MDL" exceeds 1/3 of the MCL include Carbofuran, Dalapon, Methoxychlor, Oxamyl (Vydate), and 1,2,4-Trichlorobenzene. However, the MDPH has previously agreed to employ acceptable MDLs for these parameters.

Aldicarb sulfone, Ethylene dibromide (EDB), Polychlorinated biphenyls (PCB), Toxaphene, and Vinyl Chloride cannot be composited because the resulting "effective MDLs" will exceed their respective MCLs. Since these analyses may not be composited, the MDPH's proposal to allow a higher MDL for these contaminants would be less stringent than the Federal regulation.

MICHIGAN DEPARTMENT OF PUBLIC HEALTH

DATE: 04/13/93

TO: Elgar Brown
Water Supply Division - BEOH

FROM: Dr. Williams. Ph.D., Chief
Water Analysis Section - BIDC

SUBJECT: Detection Limits

John Snyder, Senior Chemist, has reviewed the MDL data for the proposed monitoring methods regarding the attached letter. He reports that we will be able to meet requirements for dinoseb, pentachlorophenol, and di(2-ethylhexyl)-phthalate. However, although EPA Method 525.1 is approved for Benzo(a)pyrene testing, the method detection limit is 0.0001 mg/L. Our research indicates this to be the minimum level we can obtain with the method.

It is my understanding that benzo(a)pyrene (PNA) testing was to apply only to systems employing coal tar linings,and that PNA's will not be reported under limited SOC monitoring. I do not understand how this is related to the general waiver proposals you have discussed.

Assuming that PNA testing is limited, we will be able to reduce the MDL by:

1. The new GC/ITD system on order should increase sensitivity by a factor of about 10, projected 525.1 MDL~0.00002 mg/L.

2. It appears that new HPLC equipment on order would allow us to develop yet another scan for PNA (EPA Method 550.1) with MDL~0.00002 mg/L.

We are beginning to reach a consensus in the laboratory regarding EPA's use of what we believe are "minimum possible" method detection limits. While we will be able to quote these limits as determined according to EPA protocol, we consider them to be valid only in the absence of any sample related interference and with all method related interferences related to reagents, column conditions, etc. at an absolute minimum. We must then deal with how to apply these in a realistic manner to sample reporting and how these relate to a "practical quantitation limit" (PQL). This is something we need to discuss and review with those in EPA that you deal with.

cc: Dr. Martin
Sandy
Albert
John Snyder

WCD —
Can we make the "rule of thumb"?

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

REPLY TO THE ATTENTION OF:
WD-17J

OCT 23 1992

James K. Cleland, P.E., Chief
Division of Water Supply
Michigan Department of Public Health
3423 North Logan/Martin L. King Jr., Blvd.
P.O. Box 30195
Lansing, Michigan 48909

Dear Mr. Cleland:

This is in response to your August 14, 1992 letter requesting approval of Michigan Department of Public Health's (MDPH) revised monitoring waiver program. Prior to granting this approval, the following items must be acknowledged:

1. The MDPH proposes to use method detection limits (MDL) that are greater than those listed in the Federal Register for Phase II and Phase V contaminant screens. Michigan's contention is that the use of a MDL of no greater than one-half the maximum contaminant level (MCL) would be more stringent (i.e., sensitive) than the listed MDL, when composited samples are analyzed.

   Your suggestion is apparently partially supported by 40 CFR. §141(h)(10) of the Phase V portion of the regulations which allows up to five samples to be composited, "...provided that the detection limit of the method used for the analysis is less than one-fifth of the MCL." However, standard analytical practice recommends that MDLs should be no greater than one-third (one-half log unit) of the appropriate value for the analyte and matrix of concern. An MDL of one-fifth to one-tenth the appropriate value is desirable and sufficient in most cases to evaluate whether the concentration of the analyte is approaching the value critical to the decision making process. Using this rule-of-thumb, not only must the MDL for dinoseb be lowered but also those for benzo(a)pyrene, pentachlorophenol, and diethylhexylphthalate. Additional compounds where the value of five time the MDL is greater than 1/3 of the MCL are: endrin, hexachlorobenzene, PAHs, phthalates, and dioxin.

   As noted on the attached table, five contaminants cannot be composited because the MDL exceeds the 1/5 MCL criterion. Since these four contaminants cannot be composited, your proposal to allow a higher MDL for these contaminants would be less stringent than the Federal regulation.

We will therefore approve your proposal to allow MDLs that meet the rule-of-thumb, as described earlier, except for Ethylene Dibromide, Toxaphene, Aldicarb sulfone, PCBs, and Vinyl Chloride. For these contaminants, the listed MDL must be employed. For the remaining contaminants, you must meet the rule-of-thumb.

2. Private laboratories are required to use only United States Environmental Protection Agency (U.S. EPA) approved drinking water methods, and must meet the U.S. EPA MDLs for all compliance monitoring. A statement in the waiver policy indicating the proposed scans and related MDLs will be used only by the State Laboratory, and not by private laboratories will be sufficient.

3. Please describe the procedures the MDPH will follow in making individual waiver decisions. This should conform with the Sampling Waiver Guidance.

4. We have been told that the waiver reporting form is being revised. Please enclose an example of the new form in your response.

We complement you on your thoughtful and insightful proposal, and regret that we were unable to provide response as promptly as we would have liked. I am confident that final approval will be likely upon receipt of the items identified above. If you have questions, please contact me or Thomas Matheson, of the Technical Support Unit, at (312) 886-6204.

Sincerely yours,

Edward P. Watters

Edward P. Watters, Chief
Safe Drinking Water Branch

cc: Elgar Brown, MDPH

STATE OF MICHIGAN

JOHN ENGLER, GOVERNOR
DEPARTMENT OF PUBLIC HEALTH
3423 N. LOGAN/MARTIN L. KING JR., BLVD.
P.O. BOX 30195, LANSING, MICHIGAN 48909
Vernice Davis Anthony, Director

November 23, 1992

Mr. Edward P. Watters, Chief
Safe Drinking Water Branch (WD-17J)
United States Environmental Protection Agency
Region 5
77 West Jackson Boulevard
Chicago, Illinois 60604

Subject: Phase II and V Waiver Proposal

Dear Mr. Watters:

In your letter of October 23, 1992, you raised several questions concerning our waiver proposal for the phase II and V contaminant monitoring. We will try to address these as they were listed in your letter.

1. You indicated that "standard analytical practice recommends that MDLs should be no greater than one-third of the appropriate value for the analyte.." We can probably meet this criteria for the phase II and V contaminants that are part of our "limited scan" for the SOCs. We feel your reasoning for some of these criteria is somewhat flawed. For example, the MDL for aldicarb is .0005. If a five sample composite is used, the effective MDL becomes .0025. The MCL for aldicarb is .003. In this case, you are allowing an effective MDL that is 83% of the MCL. This is acceptable, but if the MDL is greater than one-fifth of the MCL, then the given MDL must be used. We believe the "rule of thumb of one-third" can be used in these cases.

   We will try to address your comments contaminant by contaminant:

   Benzo(a)pyrene - not part of our "limited scan waiver".

   Pentachlorophenol - one-third of MCL = .0003. Our MDL is .0005. We will need to lower this MDL slightly.

Diethylhexylphthalate - not part of our "limited scan waiver".

Dinoseb - one-third of the MCL = .0023. Our MDL is .007. We will need to lower this MDL.

Endrin - one-third of the MCL = .0007. Our MDL is .0001. Our lab is O.K.

Hexachlorobenzene - one-third of the MCL = .0003. Our MDL is .0001. Our lab is O.K.

PAHs - not part of the "limited scan waiver".

Phthalates and Dioxin - not part of the "limited scan waiver".

EDB - not part of the "limited scan waiver".

Toxaphene - MDL is .001. Our MDL is .001. Our lab is O.K.

Aldicarb Sulfone - MDL is .0008. Our MDL is .0007. Our lab is O.K.

PCBs - five times the MDL = .0005. Our MDL is .0005. We will need to lower this MDL. We will further investigate occurrence of this contaminant in a statewide study.

Vinyl Chloride - one-third of the MCL = .0007. Our MDL is .0007. Our lab is O.K.

2. A statement indicating the proposed scans and related MDLs will be used only by the State Laboratory will be included in the waiver policy.

3. Our procedure for making the individual waiver decisions was addressed in our flow chart that has been sent to your office. Typically, an engineer will determine if a ground water system is eligible for a "limited scan waiver". If the well is properly constructed and isolated, it very probably will qualify for the waiver. The samples for the SOC analyses are taken within the "six month summer window". If there are no detects, additional monitoring is waived in the first three year period.

Appendix D

City of Detroit - LCR Policy

STATE OF MICHIGAN

JOHN ENGLER, Governor

DEPARTMENT OF PUBLIC HEALTH

3423 N. LOGAN / MARTIN L. KING JR. BLVD.
P.O. BOX 30195, LANSING, MICHIGAN 48909

VERNICE DAVIS ANTHONY, MPH, Director

September 17, 1991

Mr. Edward P. Watters, Chief
Safe Drinking Water Branch
U. S. Environmental Protection Agency
Region V
230 South Dearborn Street
Chicago, Illinois 60604

Subject: Lead – Copper Consecutive System Monitoring Program

Gentlemen:

In an effort to more realistically meet the overall intent of the federal lead-copper regulation, the State of Michigan proposes to utilize a modified consecutive system lead-copper sampling plan for metropolitan Detroit and its wholesale customers. This same monitoring concept may be proposed by other major metropolitan cities in the state. We are using the term "modified consecutive system" because we are requiring each individual public water supply to meet appropriate conditions and are not proposing to treat the entire Detroit service area as a single system.

We believe this plan to be an appropriate approach for determining lead and copper levels in this large metropolitan system under the authority given to state primacy agencies to modify monitoring plans for consecutive water systems. The plan will parallel the consecutive system bacteriologic monitoring plan that has been successfully utilized in the metropolitan Detroit area for several decades. The distribution of lead-copper sampling locations will be proportional to the population served in each of the communities. The lead-copper sample points selected also consider the service area and water production of each of the water plants. The water quality parameter sample points will be the same as those used for bacterial sampling within most of the customer systems.

There are several valid reasons for modifying the federal lead-copper sampling plan. The water for Detroit and all its customers is supplied from five water treatment plants utilizing three intakes in lower Lake Huron and the Detroit River. The treatment scheme followed and water quality produced from the five plants is virtually the same. All treatment plants and the network of transmission mains, pump stations and reservoirs are under the control of the Detroit Water and Sewerage Department. Detroit is in complete control of the water supply operation until water is delivered to the wholesale customers

meters. The wholesale customers for the most part are passive and do not alter the water quality or pressure or have the means to provide additional treatment. With some 115 wholesale customers served, there are obvious similarities among many of these supplies as to the type of piping material in use. Over half of the customer systems do not have any lead service lines.

The required corrosion control treatment systems will be installed at the five treatment plants under Detroit's authority. The individual customers would have no practical way to implement corrosion control measures because of multiple feed points with water delivered on demand from various Detroit reservoirs and different pressure districts. All of the lead-copper analyses and necessary corrosion control studies can be performed in the monitoring time span specified for large systems instead of spreading the monitoring and possible follow-up studies over three separate time blocks. This plan will result in better coordination of data collection for the corrosion control study, performing a single system - wide study and result in the most appropriate installation of corrosion control measures with minimal if any monitoring noncompliance anticipated.

The modified plan will be as follows:

1. The modified consecutive system concept will be used to establish the minimum number of samples required per system (never less than five (5). The breakdown of samples is shown in Attachment 1. Detroit will accept responsibility for water quality parameter monitoring carried out initially at the required frequencies from plant taps and distribution system bacteriologic sampling points in most of the communities.

2. Compliance will be judged on a per-system basis and will be determined on each system's individual lead-copper levels.

3. Should any system's individual analyses result in either the lead or copper action level being exceeded, that system must then increase its monitoring to the levels indicated by the EPA published chart for all subsequent required monitoring until compliance is achieved. That system would also have to initiate the required public education actions and, if applicable after the installation of corrosion control treatment by Detroit, initiate lead service line replacement at the prescribed annual rate. All required actions for any system will follow the schedule for large systems.

Another key point may be made for this proposal. Under the proposed plan, at least one hundred (100) samples will be collected from within the City of Detroit (population: 1,200,000) as dictated by EPA's rule. Over seven hundred (700) additional samples will be collected from the remaining consecutive system service area which collectively serves a population of approximately three million (3,000,000). This proposed sample distribution

plan certainly compares more favorably than that for a large city like New York that by rule may only collect one hundred (100) samples for a population well over seven million (7,000,000).

We believe this plan provides complete system representation and is a practical approach toward implementing the final lead-copper regulation in major metropolitan areas of the state. The plan provides a clear definition of responsibilities among the major supplier and the 115 wholesale customers in a situation where treatment is provided by one supplier to many similar community customers. It allows optimum corrosion control evaluation and places the entire system on the same compliance schedule for the convenience of the systems and especially the state regulatory agency. The proposed plan will be instituted beginning in January, 1992 if the systems in the service area agree to participate.

Very truly yours,

James K. Cleland

James K. Cleland, P.E., Chief
Division of Water Supply
Bureau of Environmental
and Occupational Health

JKC:FSE

Attachment

cc: Jennifer Crooks, U. S. Environmental Protection Agency

WATER SYSTEM
DWSD SERVICE AREA

LEAD SAMPLING PLAN
FOR A CONSECUTIVE SYSTEM

	POP.	PLANT	# SAMPLES
1. ALLEN PARK, CITY OF	34,196	SW	6
2. ASH TOWNSHIP	2,000	SW	5
3. CARLETON, VILLAGE OF	-	SW	5
4. BELLEVILLE, CITY OF	2,600	SW	5
5. BERLIN TOWNSHIP	1,000	SW	5
6. BLOOMFIELD HILLS, CITY OF	3,955	LH	5
7. BLOOMFIELD TOWNSHIP	43,500	LH	8
8. BROWNSTOWN TOWNSHIP	7,300	SW	5
9. CANTON TOWNSHIP	8,800	SPW	5
10. CENTERLINE, CITY OF	9,286	NE	5
11. CHESTERFIELD TOWNSHIP	10,000	LH	5
12. CLINTON TOWNSHIP	37,900	LH	7
13. COMMERCE TOWNSHIP	940	SPW	5
14. DEARBORN, CITY OF	90,660	SPW	17
15. DEARBORN HEIGHTS, CITY OF	67,706	SPW	11
16. DETROIT, CITY OF	1,203,339	SPW WWP NE SW	41 50 5 4
17. EAST DETROIT, CITY OF	38,280	NE	7
18. ECORSE, CITY OF	4,447	SW	5
19. FARMINGTON, CITY OF	11,200	SPW	5
20. FARMINGTON HILLS, CITY OF	58,250	SPW	10
21. FERNDALE, CITY OF	26,200	NE	5
22. FLAT ROCK, CITY OF	6,850	SW	5

LEAD SAMPLING PLAN

		POP.	PLANT	# SAMPLES
23.	FRASER, CITY OF	14,500	LH	5
	FLINT, CITY OF:			
24.	BURTON, CITY OF	10,300	LH	5
25.	CLAYTON TOWNSHIP	554	LH	5
26.	CLIO, CITY OF	2,364	LH	5
27.	DAVISON TOWNSHIP	1,878	LH	5
28.	FLINT, CITY OF	193,317	LH	33
29.	FLINT TOWNSHIP	9,424	LH	5
30.	FLUSHING, CITY OF	8,624	LH	5
31.	FLUSHING TOWNSHIP	1,664	LH	5
32.	GAINES TOWNSHIP	534	LH	5
33.	GENESEE TOWNSHIP	4,400	LH	5
34.	MONTROSE, CITY OF	1,900	LH	5
35.	MONTROSE TOWNSHIP	2,000	LH	5
36.	CITY OF MT. MORRIS	3,246	LH	5
37.	MT. MORRIS, CITY OF	5,088	LH	5
38.	MUNDY TOWNSHIP	345	LH	5
39.	SWARTZ CREEK	5,013	LH	5
40.	VIENNA TOWNSHIP	1,940	LH	5
41.	GARDEN CITY, CITY OF	35,640	SPW	6
42.	GIBRALTAR, CITY OF	3,900	SW	5
	GREATER LAPEER COMMUNITY UTILITIES AUTHORITY:			
43.	ALMONT, VILLAGE OF	1,864	LH	5
44.	IMLAY CITY	2,496	LH	5
45.	LAPEER, CITY OF	6,225	LH	5
46.	MAYFIELD TOWNSHIP	468	LH	5
47.	GROSSE ILE TOWNSHIP	7,900	SW	5
48.	GROSSE POINTE PARK, CITY OF	13,639	WWP	5
49.	GROSSE POINTE SHORES, VILLAGE OF	3,122	NE	5
50.	GROSSE POINTE WOODS, CITY OF	16,361	NE	5
51.	HAMTRAMCK, CITY OF	21,300	WWP	5

WATER SYSTEM
DWSD SERVICE AREA

LEAD SAMPLING PLAN

	POP.	PLANT	# SAMPLES
52. HARPER WOODS, CITY OF	16,000	NE	5
53. HARRISON TOWNSHIP	15,000	LH & NE	5
54. HAZEL PARK, CITY OF	21,000	NE	5
55. HURON TOWNSHIP	8,700	SW	5
56. INKSTER, CITY OF	35,640	SPW	6
57. KEEGO HARBOR, CITY OF	2,700	LH	5
58. LENNOX TOWNSHIP	—	LH	5
59. LINCOLN PARK, CITY OF	45,105	SW	8
60. LIVONIA, CITY OF	104,814	SPW	19
61. MACOMB TOWNSHIP	5,000	LH	5
62. MADISON HEIGHTS, CITY OF	35,400	NE	6
63. MELVINDALE, CITY OF	12,322	NE	5
64. NEW HAVEN	1,855	LH	5
65. NORTHVILLE, CITY OF	5,698	SPW	5
66. NORTHVILLE TOWNSHIP	3,500	SPW	5
67. NOVI, CITY OF	17,630	SPW	5
68. OAK PARK, CITY OF	32,000	SPW	9
69. ORION TOWNSHIP	6,750	LH	5
70. PLYMOUTH, CITY OF	9,986	SPW	5
71. PLYMOUTH TOWNSHIP	13,100	SPW	5
72. PONTIAC, CITY OF	76,700	LH	13
73. AUBURN HILLS, CITY OF	17,000	LH	5
74. REDFORD TOWNSHIP	72,400	SPW	12

LEAD SAMPLING PLAN

	POP.	PLANT	# SAMPLES
75. RIVER ROUGE, CITY OF	12,912	SW	5
76. RIVERVIEW, CITY OF	14,569	SW	5
77. ROCHESTER HILLS, CITY OF	45,000	LH	8
78. ROCKWOOD, CITY OF	3,350	SW	5
79. ROMEO, VILLAGE OF	3,509	LH	5
80. ROMULUS, CITY OF	24,857	SW	5
81. ROSEVILLE, CITY OF	54,311	NE	9
82. ROYAL OAK TOWNSHIP - OAKLAND CO. DPW	5,800	NE	5
83. ST. CLAIR SHORES	76,210	NE	13
84. SHELBY TOWNSHIP	4,000	LH	5
SOUTHEASTERN OAKLAND COUNTY WATER AUTHORITY:			
85. BERKLEY, CITY OF	16,960	SPW	5
86. BEVERLY HILLS, VILLAGE OF	10,610	SPW	5
87. BINGHAM FARMS, VILLAGE OF	1,001	SPW	5
88. BIRMINGHAM, CITY OF	19,997	SPW	6
89. CLAWSON, CITY OF	13,870	—	5
90. HUNTINGTON WOODS, CITY OF	6,419	SPW	5
91. LATHRUP VILLAGE, CITY OF	4,329	SPW	5
92. PLEASANT RIDGE, CITY OF	2,775	SPW	5
93. ROYAL OAK, CITY OF	65,410	NE	11
94. SOUTHFIELD, CITY OF	75,728	SPW	12
95. SOUTHGATE CITY OF	32,058	SW	6
96. SOUTH ROCKWOOD, VILLAGE OF	1,477	SW	5
97. STERLING HEIGHTS, CITY OF	108,999	LH	19
98. SUMPTER TOWNSHIP	2,600	SW	5
99. SYLVAN LAKE	1,880	LH	5

WATER SYSTEM
DWSD SERVICE AREA

LEAD SAMPLING PLAN

	POP.	PLANT	# SAMPLES
100. TAYLOR, CITY OF	77,568	SW	14
101. TRENTON, CITY OF	22,762	SW	5
102. TROY, CITY OF	83,000	LH	14
103. UTICA, CITY OF	5,282	LH	5
104. VAN BUREN TOWNSHIP	9,400	SW	5
105. WALLED LAKE	6,000	SPW	5
106. WARREN, CITY OF	161,131	NE	28
107. WASHINGTON TOWNSHIP	100	LH	5
108. WAYNE, CITY OF	21,159	SW	5
109. WEST BLOOMFIELD TOWNSHIP	32,300	SPW	6
110. WESTLAND, CITY OF	84,603	SPW	23
111. WOODHAVEN, CITY OF	10,902	SW	5
YPSILANTI COMMUNITIES UTILITIES AUTHORITY:			
112. AUGUSTA TOWNSHIP	300	SW	5
113. PITTSFIELD TOWNSHIP	2,000	SW	5
114. YORK TOWNSHIP	--	SW	5
115. YPSILANTI TOWNSHIP	--	SW	5
116. SUPERIOR TOWNSHIP	1,000	SW	5
		TOTAL:	877

OCT 29 1991

5WD-IUB-9

James K. Cleland, P.E., Chief
Division of Water Supply
Michigan Department of Public Health
3423 North Logan/Martin L. King Jr., Blvd.
P.O. Box 30195
Lansing, Michigan 48909

Dear Mr. Cleland:

During the review of the Lead and Copper Consecutive System Proposal for the Detroit area submitted by your office on September 17, 1991, it became apparent that further explanation was necessary on several items. These are discussed below.

1. Please provide more information as to how population served, service area, and water production at each water plant will be used to select the lead and copper sample locations.

2. Please provide more information as to how the number of samples was calculated for each system. Specifically, questions arose upon review of sample numbers for Troy, Warren, and Westland.

3. As you know, in order for each community to complete its sampling pool, a materials evaluation must be completed in order to identify Tier 1 sampling sites and, if needed, Tier 2/Tier 3 sampling sites, as required under 40 C.F.R. §141.86(a)(1). Will each community system, the City of Detroit, or the Michigan Department of Public Health be responsible for completing the materials evaluations? Has a plan been prepared to complete these materials evaluations prior to the initiation of the lead and copper monitoring?

We look forward to the receipt of this information in order to complete our review of your proposal.

Sincerely yours,

Charlene Denys, Chief
Drinking Water Section

cc: Mike Kovach, Michigan Department of Public Health

bcc: E. Watters
C. Denys
H. Pawlowski
J. Dalessandro
C. Saada-Blume

5WD-IUB-9:JCROOKS/sym/10-28-91 CLELAND.IIR F:user/jcrooks

Robert S. Blanco, D
Enfmt + Prog. Mmgt
D.O.

JCC 10/28/91

CMSB 10/28/91 10/29/91 JD 10/29/91

STATE OF MICHIGAN

NOV 14 1991

JOHN ENGLER, Governor

DEPARTMENT OF PUBLIC HEALTH

3423 N. LOGAN / MARTIN L. KING JR. BLVD.
P.O. BOX 30195, LANSING, MICHIGAN 48909

VERNICE DAVIS ANTHONY, MPH, Director

November 12, 1991

Charlene Denys, Chief
Drinking Water Section
U.S. Environmental Protection Agency
Region V 5WD-TUB-9
230 South Dearborn Street
Chicago Illinois 60604

Subject: Lead/Copper Monitoring for Consecutive Systems

Dear Ms. Denys:

The following information addresses the specific issues raised in your October 29, 1991 letter about the lead/copper monitoring plan being implemented for the Detroit metropolitan water supply system.

1. The relative production of each of the five (5) Detroit water treatment plants was considered initially in establishing the appropriate total number of sampling sites. One hundred samples for the smallest plant service area was set as a minimum. After this initial determination, Detroit Water and Sewerage Department officials decided the City of Detroit would limit its at-the-tap monitoring to the minimum allowable under the regulation (100). The number of sampling sites within each customer community was then established in proportion to the community's population with a minimum of five (5) sample sites required.

Table Huron minimum samples - 100

2. As described above, the number of sample sites within each community is proportional to population. However, the numbers were adjusted from the plan sent to you where mistakes were noted. One such error was Westland, reported as 23 but later changed to 15. The Troy and Warren numbers are correct.

3. Each of the 115 communities operating a public water supply within the Detroit service area is responsible for selecting their sampling locations. The materials evaluation mentioned in your letter need only be done, prior to initiation of sampling, to establish enough sites to conduct the sampling program.

3. (continued)
A complete materials evaluation would only be necessary if lead service line replacement is required following initial monitoring and installation of corrosion control treatment.

We are attempting to design a reporting form for all public water suppliers which would cover the certification of sampling sites, sampling procedure and training of sample collectors. This report form could be used by each community within the Detroit service area as well.

I will be raising the certification and materials evaluation issue in our November 19, 1991 meeting on implementation of the lead/copper regulation. It is our belief that the materials evaluation used to select sampling sites should not have to be approved prior to sampling, since the sites must be certified to the state by the public water supplies. One report could be submitted to the state following each monitoring period, containing all sample results and certifications.

The state does not have sufficient knowledge of service line materials and plumbing materials to second guess the sites certified by the public water supplies. As long as the certification is done correctly, including explanations for the use of any Tier 2 or Tier 3 sampling sites, reporting at the conclusion of each monitoring period would be satisfactory. This may seem like a small matter to U.S. EPA, but we will have 4000 public water supplies reporting. Combining the materials evaluation with the monitoring results would save 4000 pieces of paper which would have to be received and tracked by the state. If the materials evaluation is not done properly, the system would be in violation following the initial monitoring period.

We are receiving positive responses from the customers of the Detroit water system, agreeing to the conditions of the consecutive system monitoring plan. Our intent is to begin implementation on January 1, 1992.

Very truly yours,

James K. Cleland, P.E., Chief
Division of Water Supply
Bureau of Environmental and
Occupational Health

JKC:ld

NOV 27 1991

5WD-TUB-9

MEMORANDUM

DATE:

SUBJECT: Michigan Department of Public Health Proposes a Plan to Sample Consecutive Systems for Lead and Copper

FROM: Edward P. Watters, Chief
Safe Drinking Water Branch (5WD-TUB-9)

TO: Robert J. Blanco, Director
Enforcement and Program Implementation Division (WH-550E)

My office has recently received an innovative proposal from the Michigan Department of Public Health (MDPH) to perform the required lead and copper initial tap sampling at consecutive systems, specifically in the Detroit area.

The Region believes that this proposal is more stringent than the Federal rule, and that it achieves the goal of public health protection, as intended in the Federal rule, while limiting the number of samples to be taken and analyzed. The MDPH plans to require sampling for lead and copper according to this proposal in January 1992 and the Region plans to approve this proposal by mid-December 1991. If you have questions concerning this proposal, please do not hesitate to contact me.

Description of the System - The operation of the Detroit Water Department is unique in that it acts as a Regional authority in its distribution to the city of Detroit, which has a population of approximately 1.2 million, and 115 wholesale customers, which range in population from 100 to 193,000. Five water treatment plants receive water from three surface water intake structures and use the same water treatment schema, which produces essentially the same water quality from all treatment plants. All treatment plants, transmission mains, pump stations and reservoirs are under the control of the Detroit Water Department. The wholesale customers do not alter the water quality or the pressure and do not have the means to provide additional treatment.

Regulation - According to the Lead and Copper regulation, the required monitoring for the initial tap sampling at each public water system (two consecutive 6-month periods) is determined by population and is listed on the following page.

5,000 → 870

Population	No. of Samples
Greater than 100,000	100
10,000 - 100,000	60
3,301 - 10,000	40
501 - 3,300	20
101 - 500	10
Less than 100	5

Alternatives - Upon review of the final Lead and Copper regulation, the MDPH had three alternatives available to them in order to accomplish the required initial tap monitoring discussed in the preceding paragraph. The first alternative involved treating Detroit and its wholesale customers as a single system. However, the MDPH believed this action would not provide an adequate amount of sampling (100 samples) to ensure the protection of public health, as intended by the regulation. It would be impossible to distinguish between the different systems, which may have different amounts of lead and copper in the distribution systems.

The second alternative involved monitoring Detroit and each of its customers individually. This would extend monitoring over 3 years; in addition, corrosion control treatment could not be optimized quickly and efficiently. Thus, the third alternative, Michigan's proposed plan to sample consecutive systems, was developed.

Michigan's Proposal - Michigan's proposal is actually a hybrid of the first and second alternatives mentioned above. The following method was used to determine the total number of sample sites.

1. The Detroit metropolitan area and its 115 consecutive systems were divided into five service areas, with each service area being served by a single treatment plant.

2. The smallest of the five service areas was initially assigned a minimum of 100 samples.

3. The other four service areas were assigned a number of samples in proportion to their water production and relative to the water production of the smallest service area.

According to the Lead and Copper regulation, 100 samples are required to be taken in the city of Detroit, which has a population of 1.2 million. If population was used in the ratio described in number 3 above, then the 115 consecutive systems, which have a total population of 2.53 million, would only be required to take an additional 210 samples. The MDPH did not believe this amount of sampling would ensure the protection of public health. Therefore, the use of water production in the above ratio was used instead of population.

As a result of this method, a total of 869 lead and copper samples will be collected during each 6-month initial tap sampling monitoring period.

The initial determination of samples per community was allocated in the following manner.

1. Within each service area, the number of sample sites was assigned to individual water systems based upon the population served.

2. A minimum of five samples per community was required.

Upon review of this initial determination of each community's sample numbers, the Detroit Water Department decided to decrease its initial tap sampling from 209 lead and copper samples to the minimum allowable under the regulation, which is 100 lead and copper samples for each 6-month initial tap sampling monitoring period. This allowed for 109 samples to be redistributed to the remaining 115 systems. The city of Detroit is served mainly by the Water Works Park (WWP) and Spring Wells Treatment Plants. The WWP Treatment Plant serves only two other small communities, therefore, with the redistribution of 109 samples, the number of samples required from the WWP Treatment Plant Service Area was decreased from 119 to 60. Detroit did not assign its required 100 samples to be taken solely from the WWP Treatment Plant Service Area, because the WWP Treatment Plant Service Area does not include approximately 50 percent of the population of the city of Detroit.

The five service areas and corresponding number of samples are provided below.

Lake Huron Treatment Plant Service Area	274
Spring Wells Treatment Plant Service Area	250
Water Works Park Treatment Plant Service Area	60
Northeast Treatment Plant Service Area	122
Southwest Treatment Plant Service Area	163

Compliance for each system will be determined by each system's individual lead and copper levels. If any system's individual analyses exceed the lead or copper action level, that system must increase its monitoring to the levels indicated in the Lead and Copper regulation, published in the June 7, 1991 Federal Register, for all subsequent required monitoring until compliance is achieved. The system would also be required to initiate the necessary public education actions. Lead service line replacement at the prescribed annual rate would also be required if the system exceeds the action level after the installation of corrosion control treatment by the Detroit Water Department.

The required corrosion control treatment will be centralized at the five water treatment plants. The individual customers have no practical way to implement corrosion control measures because of multiple feed points, water delivered on demand from various Detroit reservoirs, and different pressure districts. Two exceptions exist to this statement. These systems rechlorinate water purchased from Detroit. The city of Detroit does not wish to exclude these two systems from the proposed lead and copper monitoring program, since the addition of chlorine may cause the water to become more corrosive. The sampling data from these two systems will be utilized in the design of corrosion control for its corresponding water treatment plant.

Stringency - The question has been raised as to whether or not this proposal is as stringent as the Federal rule. The Lead and Copper regulation, 40 C.F.R. 141.80(c), states that the lead and copper action levels are exceeded if the 90th percentile contaminant level is greater than 0.015 milligrams per liter (mg/L) and 1.3 mg/L, respectively. The 90th percentile is defined as the number of samples taken during the monitoring period multiplied by 0.9. The contaminant concentration which corresponds to the numbered sample provided by this calculation, is the 90th percentile contaminant level.

Through the use of the materials evaluation, each system must identify a pool of sampling sites, which provides the system a range of lead contamination sites, as defined in 40 C.F.R. 141.86(a)(3-5). These are identified as Tier 1, Tier 2 and Tier 3 sampling sites, where Tier 1 is the worst case scenario. The intent of the Lead and Copper regulation is to use a random selection of Tier 1 sampling sites, which are the worst case scenarios, for sampling purposes. If no Tier 1 sites exist, or there are insufficient Tier 1 sites, then Tier 2 sites must be used as sampling sites. If no Tier 2 sites exist, or there are insufficient Tier 2 sites, then Tier 3 sites must be used as sampling sites. If a lead problem exists, it will most likely be identified in the initial Tier 1 sampling sites. Increasing the number of samples beyond the 869 planned for the Detroit area will not increase the chances of obtaining a 90th percentile contaminant level that exceeds the action level.

In fact, the regulation suggests that if the system takes more samples than required, the system will provide itself more leeway in keeping its 90th percentile contaminant level below the action level. By taking fewer number of samples, as this proposal suggests, the 90th percentile contaminant level is within a tighter array of samples, which will allow the action level to be exceeded more often. The fewer number of samples taken, which are by definition at high risk sites, will increase a system's chance of the 90th percentile contaminant level exceeding the action level. Therefore, this proposal is more stringent than the Federal rule, and public health protection is not compromised.

Preamble Issue - In implementing the monitoring requirements in the past for other contaminants, many States have allowed large water systems with wholesale customers to use 40 C.F.R. 141.29, Monitoring for Consecutive Systems, to reduce the monitoring requirements. This regulation allows a State to modify the monitoring requirements of the regulations when a public water system provides water to one or more other public water systems if the interconnection of the systems justifies treating them as a single system for monitoring purposes only.

The preamble to the Lead and Copper regulation, part V.C., Tap Water Monitoring, specifically discusses the use of 40 C.F.R. 141.29, Monitoring of Consecutive Systems. The original intent of this section of the preamble was to discourage the use of Section 141.29 to modify the lead and copper monitoring requirements in the Lead and Copper regulation. However, the language in the preamble was based upon knowledge of a large water system in California that distributed raw water to many wholesale customers, who each

treated the water extensively prior to distribution. Extensive treatment of water changes the quality of the water, which alters the corrosivity of the water. Corrosion control by the large system in this case would be negated by the extensive water treatment by each wholesale customer. This is a completely different scenario from the Michigan proposal, because the city of Detroit extensively treats the water, will install corrosion control treatment, and the wholesale customers do not treat the water.

The regulation does not prohibit the use of Section 141.29 for lead and copper monitoring, because there are situations, such as the MDPH's proposal, that meet the intent of Section 141.29.

Conclusion - This proposal allows the Detroit Water Department to utilize all customer results to properly design, optimize and evaluate corrosion control treatment at each water treatment plant. The entire system, Detroit and all its wholesale customers, will be placed on the same compliance schedule. All the lead and copper analyses and necessary corrosion control studies can be performed in the monitoring period specified for large systems, instead of spreading the monitoring and possible follow-up studies over three separate monitoring periods. The plan will result in better coordination of data collection for the corrosion control study, and will result in earlier installation of the most appropriate corrosion control measures. It also has the advantage of reducing the cost of achieving the goal of protecting the public health.

Based upon this review, the Region believes this proposal to be a sound and innovative approach to implementing the Lead and Copper regulation, in addition to meeting the objective and the logic of the regulation. The Region also considers this proposal to be more stringent than the Federal requirements, and believes that it provides the same amount of public health protection as intended in the Federal regulation.

bcc: D. Bryson
E. Watters
C. Denys
C. Saada-Blume
J. Dalessandro
H. Pawlowski
J. Crooks
SPOs - route

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5WD-17J

MEMORANDUM

DATE: JAN 30 1992

SUBJECT: Michigan Department of Public Health's (MDPH) Proposal to Sample Consecutive Systems for Lead and Copper - Remaining Issues

FROM: Edward P. Watters, Chief
Safe Drinking Water Branch

TO: Robert J. Blanco, Director
Enforcement and Program Implementation Division (WH-550E)

On December 24, 1991, Jeff Cohen, Chief of the Lead Task Force, contacted Charlene Denys, Chief of the Drinking Water Section at Region 5. Mr. Cohen requested that Region 5 prepare an explicit statement describing the responsibilities of each party under Michigan's proposal, for different requirements specified in the Lead and Copper rule. Mike Kovach, Regional Engineer for the eastern portion of Michigan, was contacted by Jennifer Crooks of my staff on January 3, 1992, to obtain and verify the information requested.

The following information should dispel any confusion that may have arisen during United States Environmental Protection Agency (USEPA) Headquarters' review of this proposal.

1. Detroit is accountable for all treatment at all five water treatment plants.

2. Detroit will be responsible for public education, lead service line replacement and lead and copper sampling only within its city limits.

3. Each purchasing water system will be responsible for its own public education, lead service line replacement and lead and copper sampling, with one exception. Genessee County Water Authority is responsible for delivering water to nine townships within Genessee County; therefore, Genessee County Water Authority will be responsible for the above activities within each of these nine townships.

4. Each customer utility will send the following to the Detroit Water Department upon completion of its lead and copper sampling each 6-month monitoring period:

a. The lead and copper samples collected within the utility's service area;

b. A list of the sample locations; and,

c. The required certification for each sample.

Detroit will pay for the analyses of the lead and copper samples to be performed at a certified laboratory. Upon receipt of the results of the laboratory analyses, Detroit will notify the customer utility of the results of the analyses, and the following information will be sent to the MDPH for review and for compliance determination:

a. The results of the lead and copper laboratory analyses;

b. A list of the sample locations; and,

c. The required certification for each sample.

5. The following list provides information concerning the water quality parameter samples to be taken throughout Detroit and its customer service area. Two hundred and four water quality parameter samples will be taken twice each 6-month period.

a. Twenty-five samples will be taken by the Detroit Water Department within the city of Detroit and analyzed by the Detroit Water Department. The results of these analyses will be reported directly to the MDPH.

b. The Detroit Water Department will identify 140 locations from the 70 communities where coliform samples are taken. One water quality parameter sample will be taken at each location by the Detroit Water Department and analyzed by the Detroit Water Department. The results of these analyses will be reported directly to the MDPH.

c. Southeast Oakland Water Authority (SEOWA) agreed to identify 25 locations from the 10 communities that comprise the SEOWA. One sample will be taken at each location by the SEOWA and analyzed by the SEOWA. The results of these analyses will be reported directly to the MDPH.

d. Flint will identify eight locations. One sample will be taken at each location by Flint and analyzed by Flint. The results of these analyses will be reported directly to the MDPH.

e. Genessee County Water Authority will identify six locations. One sample will be taken at each location by the Genessee County Water Authority and analyzed by the Genessee County Water Authority. The results of these analyses will be reported directly to the MDPH.

6. Detroit will be responsible for the source water monitoring, if necessary, and any other monitoring requirements associated with the Lead and Copper rule.

During Mr. Cohen's telephone call of December 24, 1991, he indicated that USEPA Headquarters believed the proposal to be satisfactory. I am pleased that USEPA Headquarters agrees with the Region that this is a sound and innovative approach to implementing the Lead and Copper rule. We are confident that implementation of this proposal will operate smoothly.

If you have any further questions concerning the MDPH's proposal, please do not hesitate to contact me or Jennifer Crooks of my staff at FTS 886-0244.

bcc: D. Bryson
E. Watters
C. Denys
C. Saada-Blume
J. Dalessandro
H. Pawlowski
J. Crooks
SPOs - route

FEB 5 1992

5WD-17J

James K. Cleland, P.E., Chief
Division of Water Supply
Michigan Department of Public Health
3423 North Logan/Martin L. King Jr., Blvd.
P.O. Box 30195
Lansing, Michigan 48909

Dear Mr. Cleland:

My office has completed its review of the Michigan Department of Public Health's (MDPH) proposal, dated September 17, 1991, to conduct the required lead and copper initial tap sampling at consecutive systems in the Detroit area.

Based on subsequent discussions with your staff, we will add the following information to the original proposal. If any of the following information is incorrect, please contact me immediately.

1. Detroit is accountable for all treatment at all five water treatment plants.

2. Detroit will be responsible for public education, lead service line replacement and lead and copper sampling only within its city limits.

3. Each purchasing water system will be responsible for its own public education, lead service line replacement and lead and copper sampling, with one exception. Genessee County Water Authority is responsible for delivering water to nine townships within Genessee County; therefore, Genessee County Water Authority will be responsible for the above activities within each of these nine townships.

4. Each customer utility will send the following to the Detroit Water Department upon completion of its lead and copper sampling each 6-month monitoring period:

    a. The lead and copper samples collected within the utility's service area;

    b. A list of the sample locations; and,

    c. The required certification for each sample.

Detroit will pay for the analyses of the lead and copper samples to be performed at a certified laboratory. Upon receipt of the results of the

laboratory analyses, Detroit will notify the customer utility of the results of the analyses, and the following information will be sent to the MDPH for review and for compliance determination:

a. The results of the lead and copper laboratory analyses;

b. A list of the sample locations; and,

c. The required certification for each sample.

5. The following list provides information concerning the water quality parameter samples to be taken throughout Detroit and its customer service area. Two hundred and four water quality parameter samples will be taken twice each 6-month period.

   a. Twenty-five samples will be taken by the Detroit Water Department within the city of Detroit and analyzed by the Detroit Water Department. The results of these analyses will be reported directly to the MDPH.

   b. The Detroit Water Department will identify 140 locations from the 70 communities where coliform samples are taken. One water quality parameter sample will be taken at each location by the Detroit Water Department and analyzed by the Detroit Water Department. The results of these analyses will be reported directly to the MDPH.

   c. Southeast Oakland Water Authority (SEOWA) agreed to identify 25 locations from the 10 communities that comprise the SEOWA. One sample will be taken at each location by the SEOWA and analyzed by the SEOWA. The results of these analyses will be reported directly to the MDPH.

   d. Flint will identify eight locations. One sample will be taken at each location by Flint and analyzed by Flint. The results of these analyses will be reported directly to the MDPH.

   e. Genessee County Water Authority will identify six locations. One sample will be taken at each location by the Genessee County Water Authority and analyzed by the Genessee County Water Authority. The results of these analyses will be reported directly to the MDPH.

6. Detroit will be responsible for the source water monitoring, if necessary, and any other monitoring requirements associated with the Lead and Copper rule.

The Region believes this proposal to be a sound and innovative approach to implementing the Lead and Copper regulation, in addition to meeting the objective and the logic of the regulation. The plan will result in better coordination of data collection for the corrosion control study, and will result in earlier installation of the most appropriate corrosion control measures. It also has the advantage of reducing the cost of achieving the goal of protecting the public health. Based upon these findings, the Region

grants its approval of the MDPH's implementation of this proposal as described above. Please keep my office apprised of the progress in implementing this monitoring approach.

I would like to take this opportunity to compliment you and your staff on developing this approach in order to implement this regulation within the constraints of your staff's current workload and funding shortage. I hope that the ties between our offices can continue to be strengthened as implementation of this regulation and upcoming regulations begins.

Sincerely yours,

Edward P. Watters, Chief
Safe Drinking Water Branch

cc: Mike Kovach, Michigan Department of Public Health

bcc: D. Bryson
E. Watters
C. Denys
C. Saada-Blume
D. Dalessandro
H. Pawlowski

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jpa 2/5/92

jpa for CMSB 2/5/92

2/5/92

2/5/92

2/5

Pat 2/5/92

Appendix E

City of Detroit - TCR Policy

App. E.

STATE OF MICHIGAN

JOHN ENGLER, Governor

DEPARTMENT OF ENVIRONMENTAL QUALITY

HOLLISTER BUILDING, PO BOX 30473, LANSING MI 48909-7973

INTERNET: http://www.deq.state.mi.us

RUSSELL J. HARDING, Director

REPLY TO:

DRINKING WATER & RADIOI
PROTECTION DIVISION
3423 N MARTIN L KING JR B
PO BOX 30630
LANSING MI 48909-8130

February 10, 1997

Mr. Roman Vitale
City of Warren
12821 Stephens
Warren, Michigan 48093

WSSN: 6900

Dear Mr. Vitale:

SUBJECT: Individual Community Compliance Determinations with the Total Coliform Rule

This letter is to notify you of a change in the way we must determine compliance with the Total Coliform Rule for customer supplies of the Detroit Water and Sewerage Department (DWSD). In the past, coliform monitoring results from throughout the DWSD water supply were combined prior to calculating whether five percent of the results were coliform positive or if any results indicated an isolated problem. **Beginning with March of 1997, compliance will be determined on an individual community basis rather than system-wide.**

This change means customer supplies collecting less than forty (40) samples may have no more than one coliform positive analysis in a month. A second coliform positive analysis will cause a maximum contaminant level (MCL) violation, with the requisite public notification and appropriate response actions. For those customers collecting more than forty (40) samples each month, no more than five percent of the results may be coliform positive.

This change in the compliance determination was prompted by recent discussions with the U.S. Environmental Protection Agency (U.S. EPA). This issue was presented to DWSD customer supplies at the January 29, 1997, meeting at the Novi Civic Center.

You should recognize that this action will require customers of DWSD to take a more active role in the coliform monitoring program. As such, it is imperative that customer supplies have a complete and up-to-date sample site plan. The plan must identify routine bacteriological sampling locations, along with their corresponding repeat sample locations. The repeat sample locations must be within five service connections, both upstream and downstream from the routine sampling location. Ideally, these sites will be located on a general plan of the system. As a minimum, the addresses of the sampling sites must be listed. The sample site plan must also include the sampling frequency, sampling technique, and a notification protocol. In the future, public notification will likely be confined to an individual customer supply, and will have to be initiated by the customer, not DWSD. A form is enclosed to assist you with completing a sample site plan. Please submit a copy of an up-to-date sample site plan for your water system for our review and future reference. You may wish to review your sampling sites with DWSD staff prior to updating this plan.

You should know that the present number of routine bacteriological samples required for each DWSD customer has been reduced based on a "consecutive system approach." Information regarding the required number of samples for each community is enclosed. There is no change anticipated in these reduced numbers. However, there may be advantages to voluntarily increasing the number of routine samples because compliance will be based on individual community results.

Another requirement you should be familiar with is the need to have a minimum of five routine samples collected in the month following a coliform positive analysis. Only those customer supplies now having less than five routine samples collected each month will be so affected. This requirement for five samples in the subsequent month is in addition to the required repeat sampling conducted within 24 hours of receiving a positive analysis. If a system fails to have the required number of routine or repeat samples collected, monitoring violations will occur. Public notification is also required for monitoring violations. Although DWSD staff may be collecting your samples, it will be the responsibility of each individual community to assure that monitoring is properly conducted and to issue any required public notices.

We understand that this decision represents a significant change in responsibility for DWSD customers. We have enclosed an article that summarizes the Total Coliform Rule for your information. It may assist you in completing the sample site plan and serve as a valuable resource for the future. **We cannot emphasize enough the importance of proper sample site selection.** A little extra planning and precaution in these matters should minimize problems that may result in public notification and concern.

If you have any questions, please contact Mr. Robert Green at 517-335-8043, Mr. Bryce Feighner at 517-335-9421, or me.

Sincerely,

Richard E Benzie

Richard E. Benzie, P.E.
Supervising District Engineer
Community Water Supply Section
Drinking Water and Radiological
Protection Division
517-335-8323

REB:im

Enclosure

cc: Ms. Judy Huddleston, Detroit Water and Sewerage Department
Macomb County Health Department

DWSD Customer Supply Bacteriological Monitoring Requirements

Oakland County

WSSN	Supply	Population	Current # samples collected/week	20% of chart value	Minimum # samples required/week	Minimum # samples required/month
0325	Rochester Hills	61,281	4	14	4	16
0630	Berkley	16,960	5	3	1	4
0690	Beverly Hills	10,610	15/month	2	1	4
0715	Bingham Farms	817	10/month	0.2	1	4
0730	Birmingham	19,997	25/month	4	1	4
0775	Bloomfield Hills	4,288	1	1	1	4
0790	Bloomfield Township	41,773	3	10	3	12
1440	Clawson	13,874	5	3	1	4
1573	Commerce Township	3,500	1	0.8	1	4
2230	Farmington	10,132	1	2	1	4
2240	Farmington Hills	78,038	5	16	4	16
2280	Ferndale	25,084	2	6	2	8
3100	Hazel Park	20,051	1	4	1	4
3310	Huntington Woods	6,419	15/month	1.4	1	4
3595	Keego Harbor	2,932	1	0.6	1	4
3740	Lake Orion	3,057	1	0.6	1	4
3800	Lathrup Village	4,329	15/month	1	1	4
4000	Madison Heights	32,196	2	6	2	8
4870	Novi	32,998	10/month	6	2	8
4880	Oak Park	30,613	2	6	2	8
5031	Orchard Lake Village	426	1	0.2	1	4
5035	Orion Township	6,649	1	1.4	1	4
5390	Pleasant Ridge	2,775	15/month	0.6	1	4
5440	Pontiac	71,166	6	16	4	16
5450	Auburn Hills	17,076	1	3	1	4
5830	Royal Oak	65,410	10	14	4	16
5840	Royal Oak Township	5,011	1	1.2	1	4
6160	Southfield	75,118	45/month	16	4	16
6530	Sylvan Lake	1,884	1	0.4	1	4
6690	Troy	77,410	4	16	4	16
6875	Walled Lake	6,278	1	1.4	1	4
6975	West Bloomfield Twp.	29,850	3	6	2	8

Appendix F

Enforcement Policy

MICHIGAN
9/02

Wording for Admin. Penalty Authority in MI SDWA + Policy for implementing civil fines for M/R + MCL VIOS

(2) Rules governing public water supplies promulgated under former 1913 PA 98, and which were in effect on January 4, 1977 are continued in accordance with section 31 of the administrative procedures act of 1969, 1969 PA 306, MCL 24.231, and may be amended or rescinded by the director under this act.

(3) No rule promulgated may require the addition of any substance for preventive health care purposes unrelated to contamination of drinking water.

Sec. 5a. (1) A supplier of water for a community supply shall not use customer site piping as a means to convey water to other portions of the supplier's system.

(2) A supplier of water for a community supply shall not provide water service to customer site piping if an impact on the water quality of the public water supply has occurred or could reasonably be expected to occur as a result of the service. A supplier of water may discontinue water service to customer site piping as the supplier of water or the department considers necessary to protect the health of the public water supply customers.

325.1006 Maximum contaminant levels; incorporation by reference.

Sec. 6. The maximum contaminant levels for inorganic and organic chemicals, microbiological contaminants and turbidity, which are part of the national interim primary drinking water regulations, and which have been promulgated by the United States environmental protection agency under authority of Public Law 93-523 (1974) before this act taking effect, are hereby incorporated by reference and shall have the same force and effect as a rule promulgated pursuant to this act. A standard which is incorporated by reference pursuant to this subsection shall remain effective until a rule is promulgated pursuant to this act which covers the same or similar subject or the standard is rescinded by rule promulgated pursuant to this act.

APO

325.1007 Collecting and analyzing water samples; reporting results of analyses; fees.

Sec. 7. (1) The supplier of water shall collect water samples or have them collected on a schedule at least equal to that outlined in the rules, shall cause those samples to be analyzed in the state laboratory or a laboratory certified by the department or by the United States environmental protection agency for contaminants listed in the state drinking water standards, and shall report the results of the analyses to the department in a timely manner as specified in the rules.

(2) If a supplier of water who serves a population of 10,000 or fewer individuals fails to comply with subsection (1), the department may do any of the following:

(a) Impose against that supplier an administrative fine of $200.00 for each failure to collect and have analyzed a water sample required under this act.

(b) For each failure to collect and have analyzed a water sample required under this act within the 12-month period following a failure described in subdivision (a), impose against that supplier an administrative fine of $400.00.

(c) In addition to an administrative fine imposed under subdivision (a) or (b), obtain a sampling or analysis or both required under this act at the supplier's cost.

(d) Proceed pursuant to section 22.

(3) If a supplier of water serving a population of 10,000 or less fails to meet state drinking water standards, the department may do any of the following:

(a) Impose against that supplier an administrative fine of not less than $400.00 per day per violation and not more than $1,000.000 per day per violation. An administrative fine for a single violation shall not exceed a cumulative total of $2,000.00.

(b) Proceed pursuant to section 22.

(4) If a supplier of water serving a population of more than 10,000 fails to comply with state drinking water standards or any monitoring or reporting requirement, the department may do any of the following:

(a) Impose against that supplier an administrative fine of not less than $1,000.00 per day per violation and not more than $2,000.00 per day per violation. An administrative fine for a single violation may not exceed a cumulative total of $10,000.00.

(b) In addition to an administrative fine imposed under subdivision (1), obtain at the supplier's cost water samples and secure analyses of the water samples at a certified laboratory if monitoring has not met minimum requirements under this act.

(c) Proceed pursuant to section 22.

(5) A supplier may appeal an administrative fine imposed under this section pursuant to the administrative procedures act of 1969, 1969 PA 306, MCL 24.201 to 24.328.

(6) Administrative fines collected under this section shall be forwarded to the state treasurer for deposit into the state drinking water revolving fund established under section 16b of the shared credit rating act, 1985 PA 227, MCL 141.1066b.

325.1008 Design and operation standards of public water supplies; considerations.

Sec. 8. The department shall give due consideration to the size, type, location, and other conditions at public water supplies for the purpose of specifying design and operation standards, and for the purpose of establishing criteria for capacity assessments.

325.1009 Classification of water treatment and distribution systems; advisory board of examiners; certificates of competency; supervision of water treatment and distribution system; individuals eligible for certificate.

Sec. 9. (1) The department shall classify public water supplies, including water treatment and distribution systems at community supplies with regard to size, type, location, and other physical conditions for the purpose of establishing the skill, knowledge, and experience that individuals need to maintain and operate the systems effectively.

(2) The director shall appoint an advisory board of examiners which shall assist the department in the examination of individuals as to their competency to operate water treatment systems and water distribution systems. The advisory board shall make recommendations to the department relative to the certification of those individuals.

(3) The membership of the advisory board shall consist of 2 certified water treatment operators, 2 certified water distribution operators, 1 superintendent or manager of a supplier of water, 1 representative of the administrative branch of a local governmental agency, 2 members of the public at large, and 1 professor of sanitary or environmental engineering at a university in the state. A representative of the department shall be the nonvoting secretary for the board.

(4) For individuals meeting the requirements, the department shall issue certificates acknowledging their competency to operate a specified class of waterworks system or portion of waterworks system. The department may suspend or revoke a certificate as specified by rule.

(5) A public water supply shall be under the supervision of a properly certified operator as specified in the rules.

(6) Those individuals now certified to operate water treatment systems under certification rules promulgated under this act, and those meeting the requirements of the voluntary distribution system

DEQ

DRINKING WATER AND RADIOLOGICAL PROTECTION DIVISION
POLICY AND PROCEDURES

NUMBER:	DWRP-03-001	
SUBJECT:	CIVIL FINES – MONITORING AND REPORTING VIOLATIONS	
EFFECTIVE DATE:	JUNE 19, 1997 (REV. #2 – 6/2000)	PAGE: 1 OF 4

ISSUE:

Monitoring and reporting requirements and drinking water standards are established for public water supplies under authority of 1976 PA 399, as amended (Act 399), for the protection of public health. Administrative fines are established under 1998 PA 56 for those water supplies that fail to comply with monitoring and reporting requirements. The fines are to be used as a tool for the Department of Environmental Quality (DEQ) and their authorized agents to promote compliance and meet regulatory enforcement responsibilities.

Suppliers must be notified of their monitoring and reporting requirements. This notification should identify the location(s) to be sampled, the specific parameters to be analyzed, and the date(s) that the monitoring and reporting must be completed. This notification should also encourage water suppliers to complete required monitoring early in the monitoring period to avoid potential complications that could result in a monitoring violation. In order to reduce the number of violations and establish a document trail for enforcement, the water supplier should also be "reminded" that samples are due just prior to the monitoring deadline established for each supply. A reminder is especially important when the required monitoring is infrequent such as annual, once per three years, once per six years, etc.

If a supplier of water fails to meet monitoring requirements, they are subject to a civil fine and required to issue public notice for the monitoring violation. The failure to issue public notice is also subject to a civil fine as a violation of reporting requirements.

DEFINITIONS:

Monitoring Period: The period of time during which a sampling event or events are required. For annual or less frequent monitoring, deadlines should be established for submittal of results before the end of the monitoring period. This is necessary to minimize "federal" violations and balance tracking and laboratory work. For example, a water supplier on annual bacteriologic monitoring (January 1, 1994 to December 31, 1994) may be required to submit the sample by November 1, 1994. Likewise, a supplier may be assigned a "monitoring period" of January 1, 1994 through December 31, 1994 for a VOC sample that is federally required to be collected on a three-year cycle. In either case, failure to collect the sample by the state/local established date may result in a reminder or warning or state/local enforcement action including fines. Note, however, a violation is not reported to the federal reporting data system (FRDS) until the full monitoring cycle (one year or three years in the above examples) has expired and no sample has been collected.

Reporting: Results of required samples, operation reports, and public notices are reporting requirements under Act 399. Suppliers of water shall be notified of reporting requirements.

Sampling Event: Required sampling during a specific monitoring period from either a single point of entry or a distribution system for a contaminant or group as indicated in Table 1. The failure to collect one or all the required samples in a sampling event constitutes a single monitoring violation.

Examples of Single Sampling Events:

Total Coliform
Routine samples; repeat samples; and five routine samples the month following a positive sample. NOTE: The daily monitoring of turbidity at the filter confluence or daily chlorine residual in one month are considered single sampling events.

Lead/Copper
Tap samples; source samples; water quality parameter samples; and follow-up samples.

Phase II/V
Limited scan analysis group "Unit 37" (IOC, SOC, VOC).

POLICY:

Sampling Events Scheduled Once Per Year or Less Frequently (i.e., Annually or Once Every Three, Six, or Nine Years):

Public water suppliers that have not reported the complete results from a sampling event one month prior to the established deadline should again be notified (reminded) of their monitoring/reporting requirements. This notification should remind the water supplier of their upcoming monitoring deadline and indicate that failure to meet this deadline will result in a monitoring violation and subject the water supplier to a fine. Water suppliers serving 10,000 or fewer individuals that fail to meet this deadline shall be assessed a fine of $200 for each missed sampling event and $200 for each failure to issue public notice. Water suppliers serving more than 10,000 individuals shall be assessed a fine of $1,000 for each missed sampling event and $1,000 for each failure to issue public notice. When this fine is assessed, the water supplier shall be given a new deadline to collect the required sample(s). Water suppliers serving 10,000 or fewer individuals that fail to meet this new deadline shall be assessed a fine of $400 for each missed sampling event and $400 for each failure to issue public notice. Water suppliers serving more than 10,000 individuals that fail to meet this new deadline shall be assessed a fine of $1,000 per day from the most recent deadline for each missed sampling event and $1,000 per day for each failure to issue public notice, up to a maximum of $10,000 per sampling event. In addition to the above, when a water supplier fails to meet a monitoring deadline or fails to issue public notice, the DEQ or an authorized agent may arrange to collect and analyze required samples, issue public notice, and bill the water supplier for this service.

Sampling Events Scheduled More Frequently Than Once Per Year (i.e., Monthly, Quarterly, Weekly, or Daily Monitoring):

Failure to collect all samples and report all results from a sampling event is a monitoring violation. The first monitoring violation in any 12-month period shall be followed by a written warning but may not

result in a fine unless the supplier fails to issue the required public notice. Failure to issue public notice is subject to a $200 fine for water suppliers serving 10,000 or fewer individuals and $1,000 for suppliers serving more than 10,000 individuals. If another monitoring violation occurs within one year, the water supplier is to be assessed a fine for the missed sampling event. Water suppliers serving 10,000 or fewer individuals shall be assessed a fine of $200 for the second missed sampling event in any 12-month period and $400 for the second failure to issue public notice. Each additional monitoring violation that occurs during the 12-month period will result in a $400 fine for each missed sampling event and $400 for each failure to issue public notice. Water suppliers serving more than 10,000 individuals shall be assessed a fine of $1,000 PER DAY for the second missed sampling event in a 12-month period and $1,000 per day for the second failure to issue public notice in a 12-month period, up to a maximum of $10,000 per sampling event. Each additional monitoring violation that occurs during the 12-month period will result in a $1,000 fine per day for each missed sampling event, up to a maximum of $10,000 per sampling event.

Administrative Fine Determinations:

Administrative fine determinations are to be based on the frequency of the required sampling, using *either* "once per year or less frequently" *or* "more frequently than once per year" as indicated above. **Violations in one contaminant group (Table 1) do not impact violations in another group with respect to the amount of the fine.**

Example: A supply serving 10,000 or fewer individuals with an annual bacteriologic monitoring violation and an annual nitrate monitoring violation would be assessed a $200 fine for each violation for the first event. If the samples are still not collected after a new date is established (within 12 months), a $400 fine would be assessed for each additional bacteriologic or nitrate violation.

Disputed Fines:

When fines are assessed but disputed by the water supplier, a hearing to resolve the case is to be scheduled by the DEQ or its authorized agent as outlined in the Administrative Procedures Act, 1969 PA 306, as amended.

Ongoing Monitoring or Reporting Violations:

Formal enforcement actions against a water supplier shall be pursued if the supplier repeatedly violates monitoring or reporting requirements despite efforts to curtail this through the notification process and assessment of administrative fines in accordance with this policy.

Voiding a Fine:

A fine may be voided before or after a requested hearing if:

1. Due to a change in ownership, the new owner was not notified of the monitoring requirements.

2. The sample was collected but could not be accurately analyzed due to either a sample transit problem or laboratory error.

3. The supplier produces the required sample results that were collected in the period for which the fine was assessed.

Other extenuating circumstances will require the approval of either the responsible Section Chief in the Field Operations Section, the Ground Water Supply Section, or the Environmental Health Section or the Environmental Health Director for local health jurisdictions under contract with the DEQ. **Documentation of the basis for the action is required in all cases.**

PROCEDURE:

Responsibility	Action
DEQ Employee	1. Determines violation has occurred, completes request for invoice, and submits to the Administration Section with appropriate documentation.
Administration Section	2. Creates invoice for monitoring fine and mails with documentation.
	3. Coordinates disputed fines and requests for hearing.
Section Chief	4. Serves as final decision point for voiding fines.

APPROVED: Flint C. Watt DATE: 6/15/00
Flint C. Watt, P.E., Chief
Drinking Water and Radiological Protection Division

Attachment: Table 1 (Public Water Supply Drinking Water Analyte Groups)

TABLE 1
PUBLIC WATER SUPPLY DRINKING WATER
ANALYTE GROUPS
(page 1 of 2)

NOTE: ONE OR MORE ANALYTES FROM A NUMBERED ANALYTE GROUP IS CONSIDERED A SINGLE SAMPLING EVENT FOR EACH LOCATION SAMPLED (POINT OF ENTRY OR DISTRIBUTION SYSTEM). FAILURE TO COLLECT ONE OR ALL OF THE REQUIRED SAMPLES IN A GROUP CONSTITUTES A SINGLE MONITORING VIOLATION.

1) MICROBIOLOGIC GROUP

BACTERIA
- TOTAL COLIFORM
- FECAL COLIFORM
- E. COLI

2) SURFACE WATER TREATMENT GROUP

CHLORINE RESIDUAL
- FREE CHLORINE
- TOTAL CHLORINE

TURBIDITY

"C*T" DETERMINATION

3) CHEMICAL GROUP

ASBESTOS

CYANIDE

PARTIAL CHEMISTRY
- FLUORIDE
- NITRATE
- NITRITE
- TOTAL NITRATE & NITRITE
- SULPHATE

LIMITED METALS
- ANTIMONY
- BERYLLIUM
- NICKEL
- THALLIUM

COMPLETE METALS -
includes "LIMITED METALS" plus:
- ARSENIC
- BARIUM
- CADMIUM
- CHROMIUM
- MERCURY
- SELENIUM

VOC
- BENZENE
- BROMOBENZENE
- BROMODICHLOROMETHANE
- BROMOFORM
- BROMOMETHANE
- CARBON TETRACHLORIDE
- CHLOROBENZENE
- CHLORODIBROMOMETHANE
- CHLOROETHANE
- CHLOROFORM
- CHLOROMETHANE
- o-CHLOROTOLUENE
- p-CHLOROTOLUENE
- DIBROMOMETHANE
- m-DICHLOROBENZENE
- o-DICHLOROBENZENE
- PARA-DICHLOROBENZENE
- 1,1-DICHLOROETHANE
- 1,2-DICHLOROETHANE
- 1,1-DICHLOROETHYLENE
- CIS-1,2-DICHLOROETHYLENE
- TRANS-1,2-DICHLOROETHYLENE
- DICHLOROMETHANE
- 1,2-DICHLOROPROPANE
- 1,3-DICHLOROPROPANE
- 2,2-DICHLOROPROPANE
- 1,1-DICHLOROPROPENE
- 1,3-DICHLOROPROPENE
- ETHYLBENZENE
- MONOCHLOROBENZENE
- STYRENE
- 1,1,1,2-TETRACHLOROETHANE
- 1,1,2,2-TETRACHLOROETHANE
- TETRACHLOROETHYLENE
- TOLUENE
- 1,2,4-TRICHLOROBENZENE
- 1,1,1-TRICHLOROETHANE
- 1,1,2-TRICHLOROETHANE
- TRICHLOROETHYLENE
- 1,2,3-TRICHLOROPROPANE
- XYLENES (total)
- VINYL CHLORIDE

TABLE 1 CONTINUED (page 2 of 2)

3) CHEMICAL CONTINUED

TOTAL TRIHALOMETHANES (TTHM)
- CHLOROFORM
- DIBROMOCHLOROMETHANE
- BROMODICHLOROMETHANE
- BROMOFORM

TTHM MAXIMUM FORMATION POTENTIAL
- CHLOROFORM
- DIBROMOCHLOROMETHANE
- BROMODICHLOROMETHANE
- BROMOFORM

LIMITED SOC
- ALACHLOR
- ALDICARB
- ALDICARB SULFOXIDE
- ALDICARB SULFONE
- ALDRIN
- ATRAZINE
- BUTACHLOR
- CARBARYL
- CARBOFURAN
- CHLORDANE
- DICAMBA
- DIELDRIN
- DINOSEB
- ENDRIN
- HEPTACHLOR
- HEPTACHLOR EPOXIDE
- HEXACHLOROBENZENE
- HEXACHLOROCYCLOPENTADIENE
- 3-HYDROXYCARBOFURAN
- LINDANE
- METHOMYL
- METHOXYCHLOR
- METOLACHLOR
- METRIBUZIN
- OXAMYL (VYDATE)
- PENTACHLOROPHENOL
- PICLORAM
- POLYCHLORINATED BIPHENOLS
- PROPACHLOR
- SIMAZINE
- TOXAPHENE
- 2,4-D
- 2,4,5-TP SILVEX

EXPANDED SOC
- DALAPON
- DIBROMOCHLOROPROPANE (DBCP)
- DIQUAT
- ENDOTHALL
- ETHYLENE DIBROMIDE (EDB)
- GLYPHOSATE

POLYNUCLEAR AROMATICS
- BENZO(a)PYRENE
- DI(2-ETHYLHEXYL)ADIPATE
- DI(2-ETHYLHEXYL)PHTHALATE

DIOXIN
- 2,3,7,8-TCDD

OTHER ORGANICS
- BROMOCHLOROMETHANE
- n-BUTYLBENZENE
- SEC-BUTYLBENZENE
- TERT-BUTYLBENZENE
- DICHLORODIFLUOROMETHANE
- FLUOROTRICHLOROMETHANE
- HEXACHLOROBUTADIENE
- ISOPROPYLBENZENE
- p-ISOPROPYLTOLUENE
- NAPHTHALENE
- n-PROPYLBENZENE
- 1,2,3-TRICHLOROBENZENE
- 1,2,4-TRICHLOROBENZENE
- 1,2,4-TRIMETHYLBENZENE
- 1,3,5-TRIMETHYLBENZENE

4) RADIOLOGIC GROUP

NATURAL RADIOACTIVITY
- GROSS ALPHA
- RADIUM-226
- RADIUM-228

MAN MADE RADIOACTIVITY
- GROSS BETA
- TRITIUM
- STRONTIUM-90

5) LEAD/COPPER GROUP

LEAD & COPPER
- LEAD
- COPPER

CORROSION CONTROL
- pH
- ALKALINITY
- CALCIUM
- CONDUCTIVITY
- TEMPERATURE
- ORTHOPHOSPHATE
- SILICA

DEQ

DRINKING WATER AND RADIOLOGICAL PROTECTION DIVISION
POLICY AND PROCEDURES

NUMBER:	DWRP-03-012
SUBJECT:	ADMINISTRATIVE FINES – VIOLATION OF STATE DRINKING WATER STANDARDS
EFFECTIVE DATE:	JULY 1, 1999 (REV. #1 – 6/2000) PAGE: 1 OF 4

ISSUE:

Drinking water standards are established for public water supplies under the Safe Drinking Water Act, 1976 PA 399, as amended (Act 399). Administrative fines are established under 1998 PA 56 for those water supplies that fail to meet state drinking water standards. These fines are to be used as a tool for the Department of Environmental Quality (DEQ) and their authorized agents to promote compliance and meet regulatory requirements.

Exposure to drinking water that exceeds a state drinking water standard puts the public health at risk. Suppliers of water to the public are responsible to comply with regulations to construct, operate, and maintain drinking water systems in a manner which prevents violations of drinking water standards and to take immediate action to protect public health, issue public notice, investigate, and resolve such violations if they occur.

The exceedance of a state drinking water standard can occur even though the water supplier has complied with regulations, procedures, and good practices; and a violation can continue even though the supplier follows all DEQ rules and recommendations to find and correct the problem. In such cases, administrative fines are normally not appropriate. However, suppliers of water that fail to exercise due diligence to prevent, report, or resolve a violation of state drinking water standards or fail to issue public notice of the violation of state drinking water standards are subject to administrative fines in accordance with this policy.

DEFINITIONS:

Contributory Category Fine: An administrative penalty issued for failure to comply with a regulation, policy, or procedure resulting in a condition which could have caused or contributed to the violation of a state drinking water standard or increased public exposure to water exceeding a state drinking water standard. This fine is not calculated on a per day basis but rather per violation of a drinking water standard where there are contributory actions or inactions. The amount of fine can be increased based on the number of contributory actions or inactions.

Examples of contributory category fines:

- Putting a public water system into service without DEQ approval.
- Failure to properly disinfect.
- Constructing or altering a water system in violation of Act 399.
- Failure to operate and maintain a well, distribution system, or treatment system in accordance with Act 399.
- Failure to maintain optimal corrosion control treatment which results in exceedance of a lead or copper action level.

Negligent Category Fine: An administrative penalty for each day the supplier of water fails to comply with a DEQ directive, compliance schedule, consent agreement, or order; fails to issue public notice; or fails to minimize public exposure associated with violation of a state drinking water standard. This fine is calculated on a per day basis.

Examples of negligent category fines:

- A water supply that was required to replace a defective vent on its elevated tank by a specific date and fails to comply with the compliance schedule; subsequently, a bird entered the vent causing a violation of the drinking water standard for coliform bacteria.
- A water supply with a maximum contaminant level violation for coliform bacteria was ordered to flush the water system and chlorinate and fails to comply with that requirement.
- A water supply exceeds turbidity limits after missing a deadline to complete specific improvements which would have eliminated or minimized this turbidity excursion.
- A water supply that exceeds drinking water standards and fails to comply with public notice requirements after being notified of the requirement.

State Drinking Water Standard: Quality standards setting limits for contaminant levels or establishing treatment techniques to meet standards necessary to protect public health.

POLICY:

Public Water Supplies Serving a Population of Not More Than 10,000:

Contributory Category Fines: The contributory category of a fine shall apply to a supplier of water when the DEQ determines an action or inaction on the part of the water supplier may have contributed to a violation of a state drinking water standard or increased exposure to water exceeding a state drinking water standard. The minimum contributory fine is $400 per drinking water standard violation and is applied when there is a single action or inaction that contributed to the violation. For each additional action or inaction which may have contributed to the violation, $200 may be added to the minimum $400 fine, up to a maximum of $1,000 per drinking water standard violation.

Negligent Category Fines: The negligent category of a fine shall apply to a supplier of water after a violation of a state drinking water standard has been identified and the supplier of water has failed to comply with a DEQ directive, compliance schedule, consent agreement, public notice requirements, or order to minimize public exposure associated with exceedance of a state drinking water standard. The negligent category fine is $1,000 per day as listed in the following schedule of fines:

SCHEDULE OF FINES: For water systems serving a population of not more than 10,000:

Contributory Category Fine		$ 400
Each Additional Contributory Action or Inaction	+	$ 200
Negligent Category Fine		$1,000 per day per violation

NOTE: For water systems serving not more than a population of 10,000, the administrative fine for any state drinking water standard violation cannot exceed $1,000 per day per violation or a total of $2,000 per violation.

Public Water Supplies Serving a Population of More Than 10,000:

Contributory Category Fines: The contributory category of a fine shall apply to a supplier of water when the DEQ determines an action or inaction on the part of the water supplier may have contributed to a violation of a state drinking water standard or increased exposure to water exceeding a state drinking water standard. The minimum contributory fine is $1,000 per drinking water standard violation and is applied when there is a single action or inaction that contributed to the violation. For each additional action or inaction which may have contributed to the violation, $400 may be added to the minimum $1,000 fine, up to a maximum of $2,000 per drinking water standard violation.

Negligent Category Fines: The negligent category of a fine shall apply to a supplier of water after a violation of a state drinking water standard has been identified and the supplier of water fails to comply with a DEQ directive, compliance schedule, consent agreement, public notice requirement, or order to minimize public exposure associated with exceedance of a state drinking water standard. The negligent category fine is $2,000 per day as listed in the following schedule of fines:

SCHEDULE OF FINES: For water systems serving a population of greater than 10,000:

Contributory Category Fine		$1,000
Each Additional Contributory Action or Inaction	+	$ 400
Negligent Category Fine		$2,000 per day per violation

NOTE: For water systems serving a population of greater than 10,000, the administrative fine for any state drinking water standard violation cannot exceed $2,000 per day per violation or a total of $10,000 per violation.

Disputed Fines:

The supplier may request a hearing within 30 days of the assessment of an administrative fine. If requested by the supplier, a hearing to resolve the case is to be scheduled by the DEQ or its authorized agent as outlined in the Administrative Procedures Act, 1969 PA 306, as amended.

Ongoing Violations of Drinking Water Standards:

Formal enforcement actions or a reassessment of the source of supply or treatment required shall be pursued if the supplier repeatedly violates drinking water standards or associated public notification requirements.

Voiding a Fine:

A fine may be voided before or after a requested hearing if the fine is found to have been issued based on incorrect information or no violation of a state drinking water standard has occurred. Other extenuating circumstances will require the approval of either the responsible Section Chief in the Field Operations Section, the Ground Water Supply Section, or the Environmental Health Section or by the Environmental Health Director for local health jurisdictions under contract with the DEQ. **Documentation of the basis for the action is required in all cases.**

PROCEDURE:

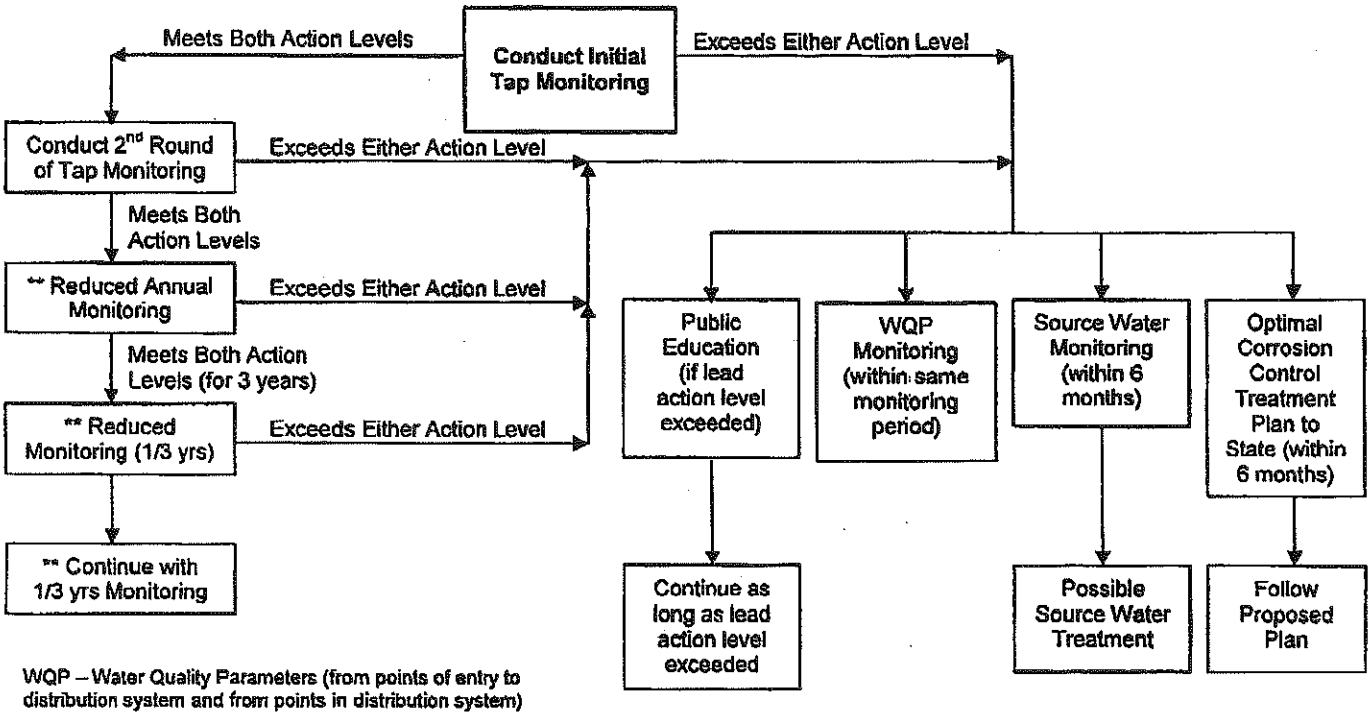
Responsibility	Action
DEQ Employee/Representative and Supervisor	1. Determines violation has occurred, completes request for invoice, and after approval by supervisor, submits to the Administration Section with appropriate documentation.
Administration Section	2. Creates invoice for administrative fine and mails with documentation. 3. Coordinates disputed fines and requests for hearing.
Section Chief	4. Serves as final decision point for voiding fines.

APPROVED: Flint Watt DATE: 6/15/00
Flint C. Watt, P.E., Chief
Drinking Water and Radiological Protection Division

MICHIGAN

Enforcement OVERVIEW

Overview of Monitoring Requirements for Lead/Copper* (Medium and Small Systems)

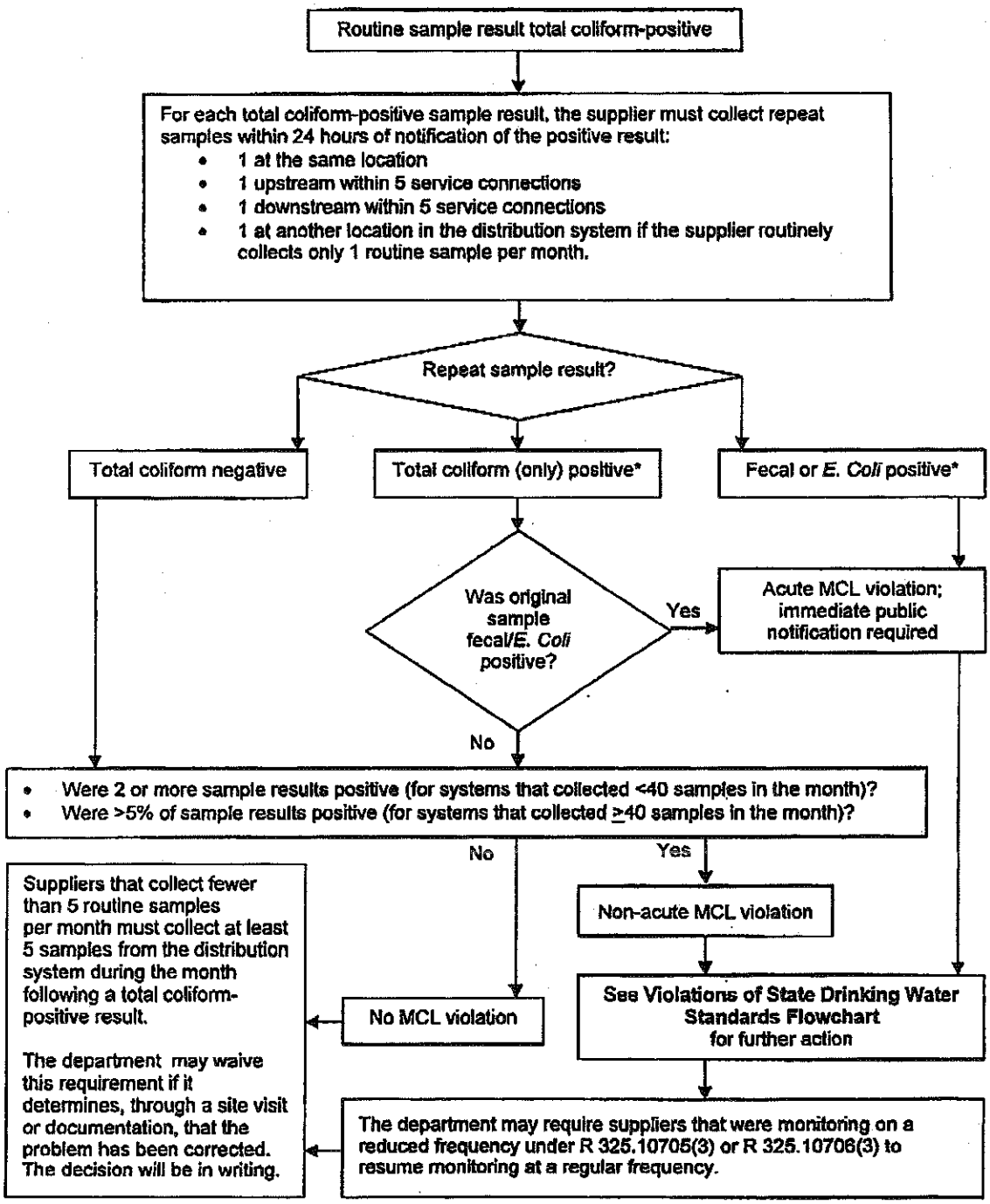


WQP – Water Quality Parameters (from points of entry to distribution system and from points in distribution system)

* Supplies should contact their MDEQ district office for further details about specific requirements under each phase of the regulations.

** Must be done during June, July, August, or September.

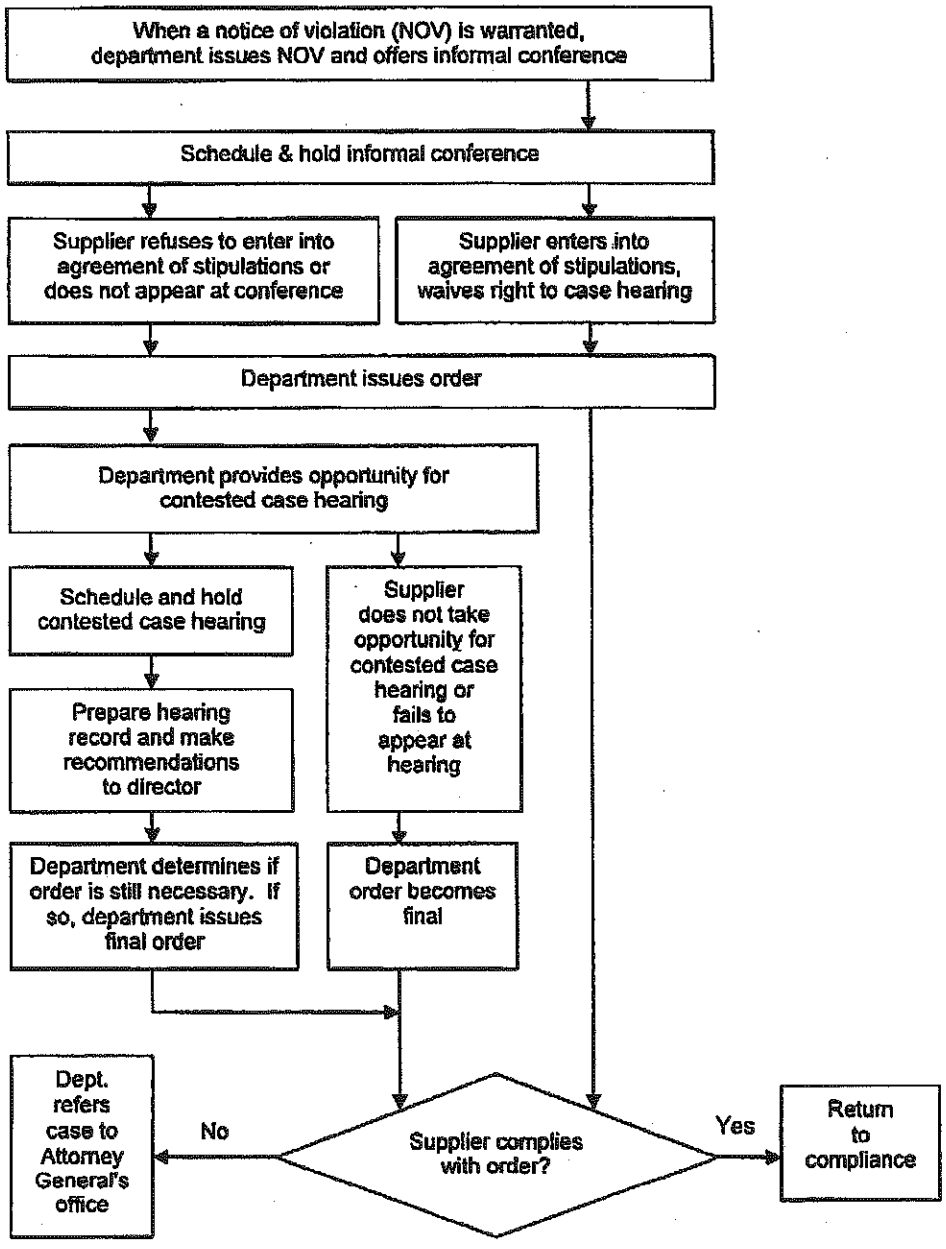
Total Coliform-Positive Flowchart



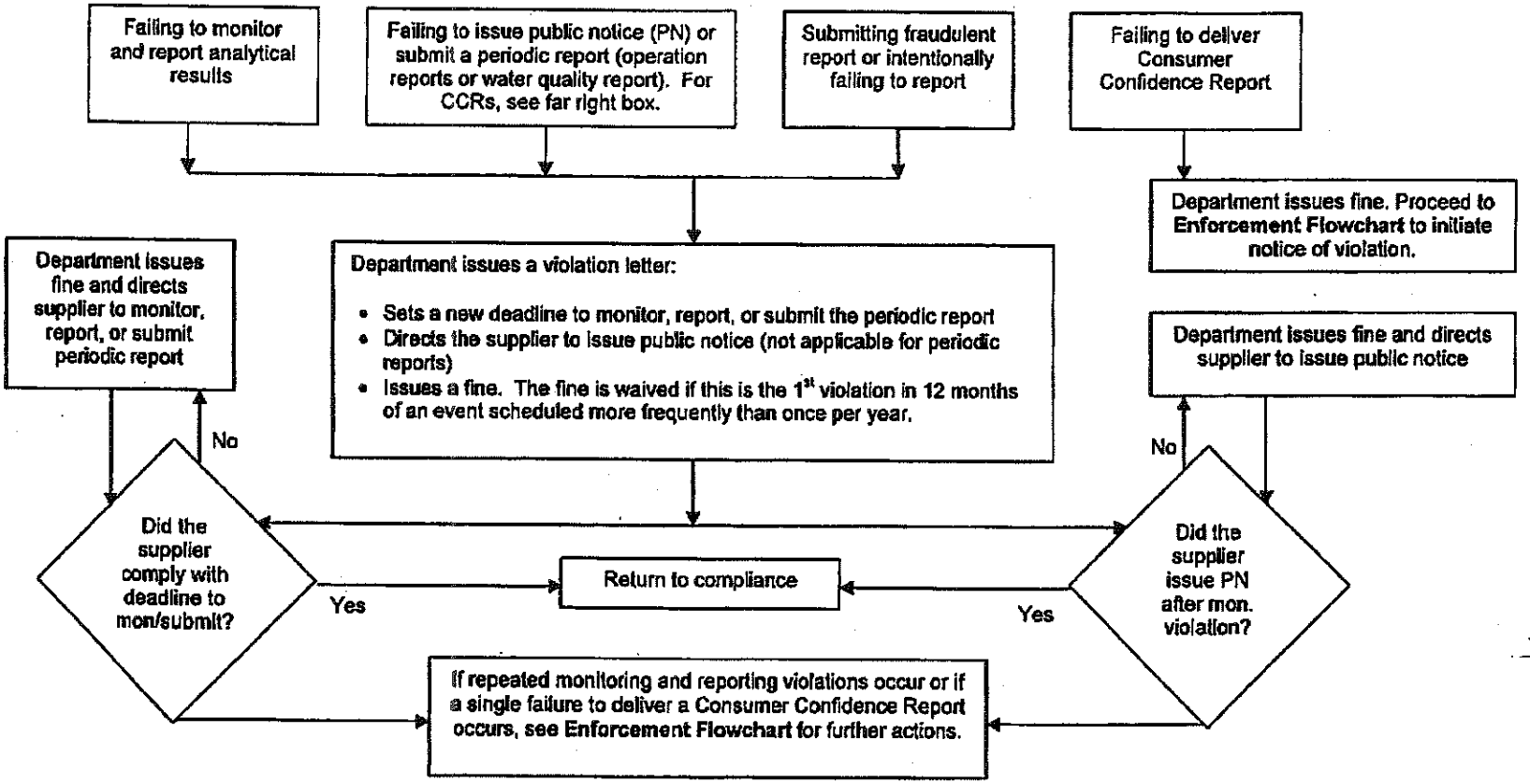
* Under Rule 707a(1)(b) if the department determines that the original total coliform positive sample resulted from a non-distribution plumbing problem, then the department may invalidate the sample if:

- the SAME location repeat sample(s) is (are) total coliform positive and
- all other repeat samples are total coliform negative
- the system consists of more than one service connection

Enforcement Flowchart



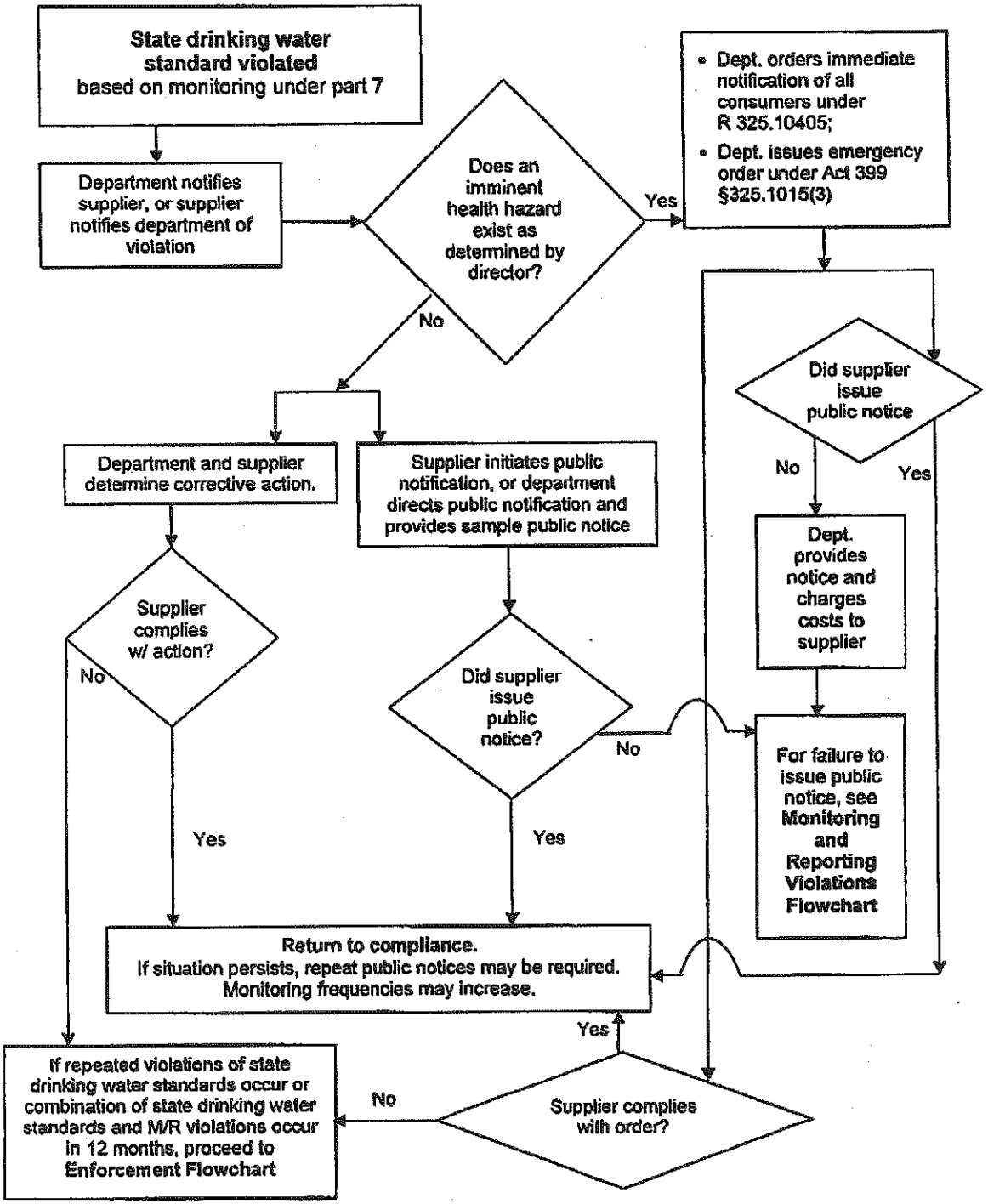
Monitoring and Reporting Violations Flowchart



For more information on fines, see the Administrative Fines Policy Summary (EQ Form 2098 11/2001) or the full text of the policies:

- Administrative Fines – Monitoring and Reporting, June 19, 1997 (Rev. #3-9/2001);
- Administrative Fines – Violations of State Drinking Water Standards, July 1, 1999 (Rev. #1-6/2000)

Violations of State Drinking Water Standards Flowchart



Phase II/V Exceeds MCL Flowchart
Inorganics & Organics (other than Total Trihalomethanes)